DOCUMENT RESUME

ED 346 342 CE 061 473

TITLE	Rural Access to Industrial Technologies. Final Report.
INSTITUTION	Illinois Eastern Community Colleges, Olney.
SPONS AGENCY	Illinois State Board of Education, Springfield. Dept. of Adult, Vocational and Technical Education.
PUB DATE	91
NOTE	238p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	Advisory Committees; College Programs; Community Colleges; Demonstration Programs; Education Work Relationship; High Schools; *Models; *Program Development; Program Implementation; Rural Areas; *School Business Relationship; *Technical Education; Two Year Colleges; Vocational Education
IDENTIFIERS	*2 Plus 2 Tech Associate Degrees; *Illinois Eastern Community Colleges

ABSTRACT

A pilot academic/vocational Tech Prep program was developed between three rural regional vocational systems and Illinois Eastern Community Colleges (IECC) to encourage more students to complete a two-year associate degree in industrial technology and obtain employment in industry. Working with three high schools/regional vocational systems and IECC, the Tech Prep program influenced approximately 300 faculty. Through a newsletter, meetings, and special events, the program made faculty and administrators more aware of the skill needs of industry, assisted in integrating academic and vocational education, and fostered improved relationships between high schools and the community colleges. (Appendixes to the report, which make up two-thirds of the document, include the following: minutes of meetings of staff and advisory councils, model programs reviewed, manufacturer survey results, the implementation plan, the articulation agreement, project newsletters, high school vocational classes survey results, and development committee members' Tech Prep ideas.) (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED346342

RURAL ACCESS TO INDUSTRIAL TECHNOLOGIES

FINAL REPORT

Illinois Eastern Community Colleges

Tech Prep Program

Illinois State Board of Education

Adult, Vocational and Technical Education

Agreement Number
1-2307-529, SDA #23

funded by

the
CARL D. PERKINS VOCATIONAL EDUCATION ACT

for
$35,000

CE061473

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

F Bauman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

TABLE OF CONTENTS

Section

A. Final Report Abstract

B. Major Accomplishments
    1. Activities and Accomplishments
    2. Product Abstract

C. Evaluation and Impact

D. Resource Listing
    1. Material Resources
    2. Human Resources

E. Problems

F. Conclusions and Recommendations

G. Publicity

APPENDIXES

A. Board of Governance Meeting Minutes

B. Development Committee Meeting Minutes

C. Advisory Council Meeting Minutes

D. Model Programs Reviewed

E. Manufacturers Survey Results

F. Implementation Plan

G. Articulation Agreement

H. Communiques

I. High School Vocational Classes Survey Results

J. Development Committee Members Tech Prep Ideas

SECTION A

Final Report Abstract

FINAL REPORT ABSTRACT

Official Project Title: Rural Access to Industrial Technologies

Department of Adult, Vocational and Technical Education Funding Agreement Number: 1-2307-529, SDA #23

Project Director: Debra Moll Hunter

Funded Agency: Illinois Eastern Community Colleges

Location of Funded Agency: Olney, Illinois

Time Period Covered: October 1, 1990, through June 30, 1991

Goal(s) of the Project and its Relevancy to Vocational Education:

The goal of this project - Rural Access to Industrial Technologies - is to articulate a pilot academic/vocational program between three rural Regional Vocational Systems and Illinois Eastern Community Colleges (IECC) that will encourage more students to complete a two-year Associate Degree in Industrial Technology programs and obtain employment in industry. This program will benefit the students by improving their training for industrial occupations and help industry by improving the quality and number of workers available in the labor pool.

The project is based on evidence that community colleges and high schools must provide clearer signals to high school students as to what is expected of them as they progress through their educational careers, and that high school students will perform better and tend to remain in school if they have clear goals to follow (Parnell, 1985).

Major Accomplishments of the Project: This section should include information about participants served, numbers served, needs met, avenues of cooperation established, pre- and post-assessment data, recognition or awards received, services provided, other outcomes, and coordination with other projects.

Working with Cisne High School/Clay-Jasper-Richland-North Wayne Regional Vocational Delivery System, Oblong High School/Twin Rivers Regional Vocational Delivery System, Mt. Carmel High School/Edwards-Wabash-Wayne-White Regional Vocational Delivery System, and Illinois Eastern Community Colleges, the Tech Prep program has had forty-six people actively involved and has influenced approximately 300 faculty. Through the newsletter, meetings and special events, Tech Prep has made faculty and administrators within the District more aware of the skill needs of industry and assisted in their understanding of integration and its importance to career preparation. These activities have also fostered relationships between academic and vocational instructors, education and industry personnel and secondary and post-secondary faculty.

Products Delivered: (Indicate titles, types, quantity, recipients, and date of delivery)

Tech Prep Three-Year Implementation Plan
Paper bound hard copy, 20 copies to:
Board of Governance
Chancellor, Illinois Eastern Community Colleges
State Board of Education
June 30, 1991

March Quarterly Report
Paper bound hard copy, 20 copies to:
Board of Governance
Chancellor, Illinois Eastern Community Colleges
State Board of Education
April 15, 1991

December Quarterly Report
Paper bound hard copy, 20 copies to:
Board of Governance
Chancellor, Illinois Eastern Community Colleges
State Board of Education
January 10, 1991

Rural Access to Technologies Final Report
Paper bound hard copy, 20 copies to:
Board of Governance
Chancellor, Illinois Eastern Community Colleges
State Board of Education
June 30, 1991

SECTION B

Major Accomplishments

MAJOR ACCOMPLISHMENTS

and

SIGNIFICANT FINDINGS

Description of Activities and Accomplishments

OBJECTIVES (Year 1)

Objective #1. Develop sequenced 2 + 2 industrial technology programs at three pilot high schools and Illinois Eastern Community Colleges with emphasis on preparation in math, science and communications and on integrating academic and vocational programs.

Procedures for Objective #1:

1A. Form a Board of Governance comprised of two representatives from the three Regional Vocational Systems selected by their respective Boards of Control and a representative from each college in the IECC District.

A Board of Governance was formed on October 19, 1990. The members representing the Regional Vocational Systems are:

Clay/Jasper/Richland/North Wayne:
Eula Adams - Co-Director
Bill Steichman - Superintendent, North Wayne District

Twin Rivers:
Scott Hamilton - Director
Sandra Ward - Principal, Oblong High School

Edwards/Wabash/Wayne/White:
James Taylor, Director
Gene Sams, Principal, Mt. Carmel High School

Representing the Illinois Eastern Community College District are:

Angelo Abbott - Dean, Olney Central College
John Arabatgis - Dean, Lincoln Trail College
Bob Boyles - Program Director, Adult and Continuing Education
Frontier Community College
Dwight Mobley - Dean, Wabash Valley College
Kenton Peak - Director of Educational Services,
Illinois Eastern Community Colleges

The Board of Governance met six times during this grant year. Their meeting dates and main topic of discussion are as follows:

October 19, 1990 - Organization of Board and determination of Development Committee members.

February 11, 1991 - Review progress of grant and determine goals for the remaining funded year.

March 18, 1991 - Development of refunding agreement and initial planning of Summer Academic VIP program.

April 3, 1991 - Approval of refunding proposal, determination of academic VIP program participants.

May 2, 1991 - Review of high school curriculum plans.

June 17, 1991 - Review of Implementation Plan and critique of grant progress.

(See Appendix A for minutes of these Board of Governance meetings.)

1B. The Board will select the Project Coordinator.

Members of the Board of Governance selected Debra Moll Hunter as Project Coordinator. She started October 1, 1990.

1C. The Project Coordinator and Board will form a Development Committee comprised of instructors, counselors and teachers from the college and three target high schools. The target high schools will be selected through a "request for proposal" process.

The Development Committee and Project Coordinator will select an Industrial Advisory Council which will include both management and labor representatives from area industries.

The Board of Governance and the Project Coordinator determined that the Development Committee would be comprised of fourteen members who represent the three high schools and three college campuses involved in vocational education. The members also would equally represent academic and vocational disciplines. Those appointed are:

Cisne High School:
- *Charles Lane - Science/Math*
- *Ken Feather - Vocational*

Lincoln Trail College:
- *Dan Polgar - Math/Science*
- *Lonnie Devin - CAD/CAM*
- *Bill Payne - Machine Shop*

Mt. Carmel High School:
- *Kathie Flood - English*
- *Bill Geurin - Counselor*
- *Rodger Peterson - Vocational*

Oblong High School:
- *Kurt Mowrer - Vocational*
- *Joe Bayless - Science*

Olney Central College:
- *Bob Haney - Communications*
- *Jim Majernik - Vocational*

Wabash Valley College:
- *Bob Effland - Electronics*
- *David Hunter - Electronics*

They were organized November 5, 1990.

The Development Committee has been active during the grant year, meeting nine times.

They have discovered what industry expects from its employees through tours of Snap-On Tools and E. H. Baare Corp., speaking with members of the Advisory Council and reading industry skill needs reported to Tech Prep through survey results.

Members became aware of the potential of a Tech Prep program by touring Hoosier Hills Area Vocational School's Tech Prep program in Bloomington, Indiana, and listening to its director, Bruce Ricklin.

Brenda Yates from the Curriculum Revitalization Program provided insight into the wealth of curriculum packages available for use with Tech Prep programs.

Scott Edgar and Jerry Ohare discussed the state's goals for Tech Prep with the Committee.

Tours of each high school assisted the Development Committee in their planning of the manufacturing Tech Prep curriculum and Implementation Plan. Larry Helsel from Eastern Illinois University and Linda Grace from Southern Illinois University at Carbondale assisted the Development Committee in determining the articulation potential of the Implementation Plan with senior institutions. (See Appendix B for minutes of all Developmental Committee meetings.)

One high school from each regional delivery system within the Illinois Eastern Community College District was selected as a pilot site. The selection process was conducted by each delivery system director, and was carried out under a "request for proposal." The high schools selected are:

Cisne High School, Cisne, Illinois
Total Enrollment: 148
Number of Faculty: 18
Enrollment in Industrial Vocational Courses: 17

Mt. Carmel High School, Mt. Carmel, Illinois
Total Enrollment: 691
Number of Faculty: 51
Enrollment in Industrial Vocational Courses: 201

Oblong High School, Oblong, Illinois
Total Enrollment: 240
Number of Faculty: 25
Enrollment in Industrial Vocational Courses: 66

The Development Committee with the Project Coordinator selected the Industrial Advisory Committee. A concerted effort was made to select companies from all segments *of the Illinois Eastern Community College District who represent a broad range of product types and plant size. Those selected and their affiliated companies are:*

Allen Endsley - Personnel Administrator, Web Printing Controls - 135 employees
Donald Dunkel - Total Quality System Manager, Snap-On Tools - 600 employees
Tom Wood - Operator, Snap-On Tools - 600 employees
Nancy Garrett - Personnel, Thordarson-Meissner, Inc. - 90 employees
Phil Freeman - Pioneer Labels, Inc. - 28 employees
Mike Uptmore - Production Control Manager, E. H. Baare Company - - 150 employees
Jim Thompson - President, Indian Refining
Jeffrey Watson - Vice President, Oak Valley Wood Products - 16 employees
Denise Terveer - Human Resource Assistant, Sunbeam Plastics - 150 employees
Bob Wonsetler - Executive Vice President of Engineering, Pacific Press and Shear - 200 employees
Ron Burger - Manager Tool Engineering, Champion Laboratories - 1950 employees
Jerry Botkin - Production, Hella Electronics Corp. - 850 employees
Mike Knapp - Personnel, Sparton Manufacturing - 350 employees
Tom Schnell - Industrial Relations Representative, Amax Coal
Dennis Jacobs - Human Resource Manager, Yale South Haven Products
Brenda Vatlin - Technical Manager, Emerson Radio
John Collier - Personnel and Training Supervision, Leaf, Inc. - 450 employees

The Industrial Advisory Council held its organizational meeting January 10, 1991, and met again on February 5, March 12, and May 15. The Advisory Council has provided the Tech Prep initiative with an insight into current manufacturing skills. A number of companies has provided written listings of their technical job titles and the skills required of these individuals. This information provided the Development Committee with not only skill levels, but actual position details. During the February 5th meeting, the Advisory Council had an opportunity to speak directly with the Development Committee to explain their skills information. This was a mutually beneficial meeting with the advisory Council learning about the educational system.

On March 12, the Advisory Council discussed their exit requirements for Tech Prep graduates at both the high school and college level.

During the May 15 meeting, the Council approved the manufacturing Tech Prep curriculum and Implementation Plan. (Appendix C contains the minutes from these meetings.)

1D. The Project Coordinator and Development Committee, in cooperation with the Industrial Advisory Council, will review math, science, communications, and technical courses at target high schools and IECC to determine what changes are needed to enhance sequencing for the electronics, CAD/CAM and machine shop technology 2 + 2 programs and develop a plan for sequencing courses in these curricula.

The Development Committee, during their December 11, 1990, meeting, reviewed the curriculums at each high school. Particular attention was given to the vocational, math, *science and communications courses. Also discussed were the differences among the high schools.*

The Development Committee concluded that there were numerous courses already in place within each high school that can be modified for inclusion in the manufacturing Tech Prep curriculum.

The current high school curriculums were compared with those of other Tech Prep programs. (See Appendix D for information on the Tech Prep programs reviewed.)

The Development Committee felt that because Southeastern Illinois was more rural and the high schools smaller than any of the Tech Prep programs reviewed, it was impossible to make direct comparisons. However, certain elements of the various programs, such as offering high school courses at the college campuses, were viewed as applicable, and will be reviewed as our Tech Prep curriculum is developed.

1E. The Development Committee will draw up a curriculum development plan that will provide academic and vocational curriculum that is complementary and will address the goals of the 2 + 2 program. The Committee will recommend curriculum changes, where needed, to insure, for example, that the math courses will provide appropriate preparation for the industrial technology programs and that the academic subjects include "hands on" experience with practical applications of theory.

The Development Committee completed the curriculum development plan in May of 1991. The complete curriculum plan can be found in the Implementation Plan located in Appendix F. An abstract of the Implementation Plan appears in Section B2.

1F. The Project Coordinator will develop and conclude articulation agreements between the three regional delivery systems and Illinois Eastern Community Colleges for the three 2 + 2 programs described.

Following the completion of the Implementation Plan, an articulation agreement was developed and circulated to the appropriate administrators for each regional delivery system and Illinois Eastern Community Colleges. The agreement is expected to be signed by late August, 1991. (See Appendix G)

Objective #2. Establish a three-year plan for implementing and disseminating the pilot 2 + 2 program at three pilot high schools.

Procedures for Objective #2:

2A. An implementation plan, including a description of goals and objectives for the next three years, responsibilities of personnel, evaluation measures and instruments, and dissemination plans, will be completed by the Project Coordinator and Development Committee, in cooperation with the school and college administrators.

A three-year implementation plan was completed by the Development Committee and the Project Coordinator. The plan details the procedure for FY 92 and outlines the *implementation for the following two years. The complete implementation plan can be found in Appendix F.*

2B. The Project Coordinator, in cooperation with the Development Committee and the State and Industrial Advisory Council, will recommend entrance and exit requirements for the 2 + 2 program by completing a competency list for each of the three programs. These will be presented to local school boards for approval and included in the Implementation Plan.

The development of a competency list for each program has proven to be a lengthy and difficult process. In an effort to determine the skill needs of area manufacturers, a skill survey was sent to 134 manufacturing companies in the Illinois Eastern Community College District. This survey was intended to reveal a detailed picture of what skills area employers require of their general laborer, skilled trade, office technical, and first and second level management. The survey also allowed for a comprehensive look at types of manufacturers, their size, age and automation level. (See Appendix E for survey and survey results.) The information gained from this survey coupled with detailed job information provided by Advisory Council members has given us a wealth of data on skills. The challenge is determining the school level equivalencies of these skills. It is hoped that by the end of FY 92, we will have a complete list of competencies and be in the process of developing a test that will act as a barometer for entrance and exit from the program.

Currently, it has been determined that an eighth grader who is interested in the manufacturing Tech Prep program and possesses the aptitude to complete the freshman courses, will be admitted as a Tech Prep manufacturing student.

During the March 12th meeting of the Advisory Council, members determined their exit requirements. They feel that if a student completes the Tech Prep program at either level with a "C" average and is able to provide a transcript to prove this, plus a detailed resume, they would offer that student preferred hiring. They also felt that Tech Prep graduates, because of the skills they would possess, would be preferred candidates for advancement and apprenticeship programs.

Objective #3. Provide staff development for high school and college instructors who will be teaching courses in the 2 + 2 program and assist them in developing a complementary program of academic and vocational course work; provide staff development for counselors.

Procedures for Objective #3:

3A. The Development Committee will draw up a staff development plan to prepare both vocational and academic teachers to:

* Work as a team to integrate the academic and vocational course work;
* Upgrade their knowledge of modern industrial practices.

The Development Committee will prepare a plan for inservice training of counselors to increase their knowledge of the 2 + 2 program to include:

* Student entrance requirements;
* Recruitment of female and minority students:
* Specific articulation agreements;

- Placement needs;
- Job opportunities in technical fields.

Staff development activities for this year have included:

- *A presentation by the Coordinator during the Wabash Valley College faculty workshop. She discussed the Tech Prep initiative and its effects on Wabash Valley College. She also showed a clip from the manufacturing teleconference that detailed the manufacturing process of Macintosh Computers.*

- *Rodger Peterson, a member of the Development Committee and a vocational instructor at Mt. Carmel High School, presented a detailed report of the Tech Prep effort at Mt. Carmel High during their faculty meeting March 15.*

- *The Development Committee members have expanded their understanding of Tech Prep through a tour of the Bloomington, Indiana, Tech Prep program and facilities. The Committee has also increased its knowledge of current manufacturing practices by touring:*

  Snap-On Tools
  E. H. Baare Corporation
  Amax Coal Company (via video)

- *The Coordinator presented a forty minute lecture to the faculty and administrators at Cisne High School. The discussion included information on current manufacturing technologies and the Tech Prep goals and objectives.*

- *Faculty members from the various sites were invited to a presentation on the German Dual System. This informative talk was given by Karl Uthman, the Director of Research and Development for Vocational Training Programs at the Federal Institute for Vocational Training in Berlin, Germany. Information was provided regarding the structure of the German apprentice program and their training requirements.*

3B. The Coordinator, working with the Development Committee, will develop and conduct a joint college-high school workshop for instructors and counselors on the new 2 + 2 industrial technology programs.

Many of the staff development opportunities involved college and high school faculty interaction. These presentations have not addressed all aspects of the manufacturing Tech Prep program during one workshop. This type of presentation is planned for early fall and will be used to explain the manufacturing Tech Prep program to all faculty involved in Tech Prep.

Objective #4. Improve access in rural areas to new developments in industrial technology by studying the equipment needs at the three pilot high schools and at IECC and developing a plan for sharing equipment and resources.

Procedures for Objective #4:

4A. The Coordinator, with the advice of the Development Committee and the local industrial advisory council, will establish recommendations for equipping vocational programs at the secondary and community college levels relating to maching shop technology, electronics, and CAD/CAM. These recommendations will be incorporated into an equipment acquisition plan that will focus on sharing resources to give students in both academic and vocational courses maximum hands-on experience with equipment.

An equipment needs list has been incorporated into the Implementation Plan (Appendix F). The identified equipment needs will be acquired through a variety of resources. These iclude: Tech Prep grant money, scientific literacy grants, local college and high school monies, and regional vocational delivery system budgets. Additional money, if needed, will be sought from local manufacturers.

Resource materials have been purchased through Tech Prep funds. The majority of these will be housed in the Tech Prep office and loaned to schools on a request basis. Those that are not copyrighted will be copied and distributed to each school.

Objective #5. Initiate an awareness program in middle schools and high schools for students and counselors that will focus on job opportunities in industrial technology, with emphasis on opportunities available to women and minorities.

Procedures for Objective #5

5A. The Development Committee will identify at least three mentors per school who will be responsible for disseminating information about opportunities in industrial technology to high school and middle school students. These mentors will include instructors, counselors and industry representatives, with representation from female and minority populations.

To avoid misinformation and confusion, the Development Committee decided it would be best not to disseminate information to students until they had determined the course sequencing. Because of this decision, the mentors have been put on hold until the 1991-92 school year.

5B. The mentors will formulate an awareness campaign, which will include field trips to manufacturing plants and college labs, to give middle school and high school students a "hands on" introduction to computerized industrial technologies. This campaign plan will include specific strategies for recruitment of minority and female students.

In an effort to make students aware of the Tech Prep initiative, the Project Coordinator set up a booth at the Mt. Carmel Career Day. During the hour and one-half fair, the Coordinator was able to share with students the opportunities that will be available to a Tech Prep student.

Additional student awareness efforts have included:

* *Development Committee faculty presenting information to their classes and incorporating application activities into their courses;*

** Olney Central College's Lamplighter (student newspaper) interviewed the Coordinator and published the article in their May issue;*

** Oblong High School and Lincoln Trail College students participated in the manufacturing teleconference held in January, 1991. Through this presentation, they were able to learn about Tech Prep and the developments in manufacturing.*

Objective #6. Outline long-range plan for twenty high schools in the Illinois Eastern Community College District.

Procedures for Objective #6:

6A. The objectives of the FY 92 grant proposal which form the basis of our long-range plan are as follows:

OBJECTIVES:

1. Begin implementing manufacturing Tech Prep,
2. Review Manufacturing Technology Implementation Plan,
3. Develop Tech Prep business program at three high schools,
4. Work with three additional high schools to develop Tech Prep business or manufacturing programs,
5. Develop a three-year Business Implementation Plan,
6. Broaden scope of Tech Prep Advisory Council,
7. Provide staff development for teachers,
8. Develop resource needs and allocation plan,
9. Develop marketing campaign,
10. Develop articulation agreements with universities,
11. Develop work-based component,
12. Evaluate Tech Prep activities, and
13. Disseminate Tech Prep activity information to other programs, schools and businesses.

PROCEDURES:

1. Teach modified courses, identify students,
2. Modify Manufacturing Technology Implementation Plan,
3. Establish committees,
   Develop 4 + 2 curriculum for business,
   Conclude business articulation agreements,
4. Select additional high schools,
5. Determine entrance/exit requirements, outline Business Implementation Plan,
6. Identify Tech Prep Advisory Council,
7. Conduct two faculty/counselor workshops,
8. Outline resource needs and allocation plan,
9. Outline and execute marketing campaign,
10. Outline articulation agreements with state universities,
11. Outline work-based components,
12. Evaluate results, and
13. Disseminate Tech Prep products.

Objectives for subsequent years will include expanding the areas of Tech Prep to include health, agriculture and home economics. This will be accomplished through the implementation at selected high schools until all district high schools are involved. As the secondary component for each new area is implemented, the college programs will be targeted for revision.

Objective #7. Evaluate the pilot project in Year 1 and make plans for evaluation in succeeding years.

Procedures for Objective #7

TIME SEQUENCE FOR IMPLEMENTATION OF TECH PREP PLANNING YEAR

Proposed Date	Description and Completion Date if Different
Summer, 1990	Board of Governance formed
September, 1990	Board selects Project Coordinator
October 1, 1990	Coordinator starts
October 10, 1990	Regional supervisors select target high schools
October 10, 1990	Board and Coordinator select Development Committee
October 30, 1990*	Progress report filed with ISBE
October 31, 1990*	Development Committee and Coordinator select Industrial Advisory Council (01-10-91)
November, 1990	Coordinator, Committee and Council will select and review (by 01-22-91) three model 2 + 2 programs
November, 1990	Council and NIU will determine needs of industry (survey March, 1991)
November - December, 1990	Committee will create faculty development plan (Detailed plan not created)
December, 1990	Coordinator, Committee and Council will review current math, science, communication and technical courses (02-20-91)
December 30, 1990*	Committee identifies three mentors per high school (not accomplished)
January, 1991	Coordinator, Committee and Council will determine sequencing of courses for each technical program (04-01-91)
January, 1991	Begin curriculum approval process (05-30-91)
January 31, 1991*	Progress report filed with ISBE, Chancellor and Regional Vocational Directors

January 31, 1991*	Mentors will complete plans for Awareness Campaign (not accomplished)
January 31, 1991	Newsletter circulated
February 15, 1991	Committee will determine course development plan for academic and vocational courses (04-30-91)
February 15, 1991	Determine field testing method for curriculum plan (05-30-91)
February 28, 1991	Newsletter circulated
February 28, 1991*	Circulate curriculum plan and course changes to faculty and administrators at IECC and high schools (05-30-91)
March 1, 1991	Coordinator, Committee, Council and State begin developing entrance and exit requirements (04-30-91)
March 1, 1991	Coordinator, Committee and Council determine equipment needs (05-10-91)
March 15, 1991	College faculty and administrator responses to curriculum plan and courses (05-30-91)
March 20, 1991	Coordinator, Committee and Council will develop Resource Sharing Plan (06-30-91)
March 28, 1991	Utilizing curriculum plan, entrance/exit requirements, Resource Sharing Plan, and Implementation Plan will be created (06-30-91)
March 30, 1991	Newsletter circulated
April 1, 1991*	Implementation Plan will be submitted to the outside evaluator (06-30-91)
April, 1991	Coordinator will develop articulation agreements with high schools and IECC (06-30-91)
April 30, 1991	Newsletter circulated
April 30, 1991	Outside evaluator will submit recommendations (June 1) (not accomplished)
April 30, 1991*	Progress report filed with ISBE
April 30, 1991*	Coordinator will seek approval of curriculum package from the Board (06-30-91)
May, 1991	Faculty in-service (not accomplished)

May 31, 1991*	Coordinator will conclude articulation agreements with high schools and IECC (06-30-91)
May 31, 1991*	Distribute curriculum plan and course changes to high schools and IECC faculty (06-30-91)
May 31, 1991*	Submit Implementation Plan to administrators and manufacturers (06-30-91)
May 31, 1991*	Industry mailing list completed (05-30-91)
June 20, 1991*	Student brochure completed (not accomplished)
June 30, 1991*	Final report filed

KEY:

Project Coordinator = Coordinator
Development Committee = Committee
Industrial Advisory Council = Council

During their final meeting for FY 91, each committee was given an opportunity to critique the progress and process of the Tech Prep program. Their comments are as follows:

Advisory Council -

* *They would have liked to be more involved during the formulation of the curriculum and Implementation Plan.*

* *They are very encouraged by the progress that has been made.*

* *They feel the relationships that have been forged between education and industry are positive and productive.*

Development Committee -

* *They felt the tours taken during the Development Committee meetings were very beneficial. The Hoosier Hills Area Vocational School in Bloomington, Indiana, was particularly informative.*

* *Visiting the schools involved provided unique insights into the challenges and potentials that Tech Prep will offer each school.*

* *The Communique, the Tech Prep newsletter, was very helpful in disseminating information on Tech Prep achievements.*

* *The committee suggested that Development Committee members meet once a month for a full day, varying the weekday for each meeting.*

** It was suggested that committee members take the opportunity to observe other classes in their school.*

Objective #8. Disseminate the project in Year 1 and make plans for dissemination in succeeding years.

Procedures for Objective #8

8A. Develop awareness of 2 + 2 articulation project -- As the articulation project develops, the Project Coordinator will develop and maintain communication with administrators and faculty and the three target high schools and the community college, as well as with local manufacturers and labor unions. This will be accomplished by the Project Coordinator who will be:

* Developing a monthly newsletter for distribution to counselors, administrators, and faculty involved in the new 2 + 2 pilot program.

The Communique newsletter was published in January, February, March and April and distributed to all faculty and staff at each school involved in Tech Prep. (See Appendix H for copies.)

* Developing a mailing list of manufacturers and labor union leaders to be used in Year 2 for distribution of a brochure describing the new articulation program and its potential benefits for employers and employees.

A mailing list of all identifiable manufacturers was developed. The list includes manufacturer's name, address, phone, contact name and product information.

* Establishing the Development Committee and the Industrial Advisory Council described in Procedures 1A through 1F.

The Development Committee and Industrial Advisory Council were established. The minutes from their meetings can be found in Appendix B and C.

8B. In an effort to improve communication and develop relationships between administrators, faculty and industry, the Coordinator has visited with and made Tech Prep presentations to a wide variety of groups. These have included:

EDUCATIONAL ADMINISTRATION BOARDS --
Twin Rivers Board of Control (10-15-90, 03-18-91)
Twin Rivers Student Services (10-17-90, 12-05-90)
Clay/Jasper/Richland/North Wayne Board of Control (10-18-90)
IECC Regional Board of Control (03-15-91)
Oblong Board of Education (04-15-91)
West Richland High School Regional Advisory Council (04-29-91)
Edwards/Wabash/Wayne/White Board of Control (05-03-91)

MANUFACTURING COMPANIES --

Leaf Corp., Bruce Frey (10-17-90), John Collier (02-19-91)
Briggs Corp., Ernest Flower (10-17-90)
Snap-On Tools, Robert Gruber (10-18-90), Education Committee (02-21-91)
Champion Labs, George Ewald (11-07-90)
Web Printing Controls, Allen Endsley (11-07-90)
E. H. Baare Corp., Mike Uptmore (11-08-90)
Richland County Development Corporation (12-20-90)
Pioneer Labels, Phil Freeman (02-19-91)
Thordarson-Meissner, Nancy Garrett (02-21-91)

AREA EDUCATORS --

Decatur Symposium (03-27-91)
Sixth Linkages in Vocational Education for Special Needs Conference (04-08-91)
IVSSN Conference, Mt. Vernon, IL (04-30-91)

To further assist in the dissemination effort, a teleconference was sponsored on January 16, 1991. Lincoln Trail College served as the down-link site for the "Manufacturing in the 90's" program produced by DeAnza College in California. The teleconference explained the new manufacturing techniques that are influencing product design, automobile production, and the space program's role in these changes. The presentations were followed by a phone-in question and answer period. After the broadcast, a local panel answered questions from the audience. Members of the panel were: Lonnie Devin, CAD Instructor at Lincoln Trail College; Scott Hamilton, Twin Rivers Regional Vocational Director; and Don Dunkel, Total Quality System Director, Snap-On Tools.

The public, area manufacturers and members of the various Tech Prep committees were invited to a presentation entitled "Work-Based Learning - The German Approach." Working with Northern Illinois University, we developed a program that focused on the German Dual System and its applicability to Tech Prep. On May 8, a working luncheon for members of various Tech Prep committees and the German representative was held. The lunch was followed by a formal presentation open to the public.

Additional publicity efforts have included: two news releases distributed to twenty-seven news agencies in the Illinois Eastern Community Colleges District, December 22, 1990 and February 7, 1991. (Section G contains copies of all publicity materials.) The Mt. Carmel radio station, WVJC, broadcasted an in-depth report on January 10, 1991. On February 27, 1991, the WVC Journal on Channel 10 in Mt. Carmel was devoted to Tech Prep. During the half hour cable series, the Coordinator and Rodger Peterson, a Development Committee member discussed the Tech Prep initiative and plans for the Mt. Carmel area. The state-produced Tech Prep video was also used during the broadcast.

8C. Decide on content and structure of articulation program and how it can be effectively field tested in the three high schools. This will be accomplished by:

* Drafting curriculum changes, and

* Circulating these changes to faculty and administrators who are participating in the pilot program in order to obtain their response and input.

Because the Implementation Plan was not ready until late May, there was no time to circulate the changes among the faculty before the summer break. However, even though we were unable to officially distribute information, most of the high school faculty who will be involved in the implementation process during FY 92 were consulted on the curriculum changes and played an active role in its development.

8D. Develop understanding of course development process and purpose. This will be accomplished by:

* Submitting a report describing the purpose of the program and how it will be evaluated and implemented to all administrators and manufacturers.

The Implementation Plan was distributed to site administrators and advisory manufacturers during June, 1991. The manufacturers' reaction is included within the Implementation Plan (see Appendix F.)

8E. Sponsoring one inservice workshop for teachers, college instructors, and counselors from IECC and the pilot high schools and all interested parties in other high schools.

A workshop is planned for early fall that will meet this procedure. Because of the delay in determining the curriculum and Implementation Plan, this workshop was not able to be held before schools released for the summer.

8F. Implementing project outcomes. This will be accomplished by:

* Packaging curriculum changes and distributing these to faculty at three pilot high schools and IECC.

Due to the delay in the development of the Implementation Plan information on the curriculum, changes have not been distributed to all the faculty at the three high schools and IECC. During the first quarter of FY 92, information on the curriculum changes being implemented for the manufacturing Tech Prep program will be relayed to all faculty members.

* Developing brochures for students at three target high schools describing the articulated program and how it can further their career goals.

The brochure for students was put on hold until the Implementation Plan was approved. It was felt that this would increase the accuracy of the brochure and reduce possible confusion. A student brochure describing Tech Prep and manufacturing careers will be distributed to high school students at the three pilot sites in the Fall of '91. The brochure is planned so it will accommodate the individual high school curriculum.

The following are activities and accomplishments that have occurred during the funded year which are fundamental to the success of the Tech Prep initiative, but do not correlate directly to an objective as stated in the grant.

On October 9, 1990, the Project Coordinator visited Scott Edgar of the State Board of Education in Springfield to learn the state's role in monitoring Grant Agreement 1-2307-529, SDA #23, and the *forms needed for reporting. While in Springfield, the Project Coordinator visited the Curriculum Library at Sangamon State to find out the contents of their holdings and determine how they can assist in the development of the Tech Prep curriculum.*

To gain a broader view of the approaches to Tech Prep, the Project Coordinator visited with Don Kinzy, Director of the Elgin Community College Tech Prep Program and Pamela Block from Northwest Suburban Career Cooperative (October 22, 1990). Further perspective was gained when the Coordinator attended a meeting of manufacturing Tech Prep directors sponsored by the State Board of Education and Northern Illinois University on December 11, 1990. The Project Coordinator also attended the Society of Manufacturing Engineers Conference for Educators entitled, "Successful Key Strategies for Planning and Teaching Automated Manufacturing," October 23 - 25, 1990, which provided an opportunity to talk with vocational educators from around the country and to discover how they are integrating curricula, articulating with community colleges and planning manufacturing technology programs. These experiences have provided the Project Coordinator with an understanding of strategies that work and activities to be avoided.

The Project Coordinator, along with Bill Geurin, a member of the Development Committee, and Kenton Peak, a member of the Board of Governance, attended the State Tech Prep meeting March 5, 1991.

During December, 1990, a survey was distributed to all secondary vocational classes at the three pilot high schools. The results of the survey are recorded in a report located in Appendix K. Some of the interesting trends the survey revealed are:

- *a majority of students are in vocational classes because they are interested in the subject.*

- *most students realize that math plays a major role in vocational classes, but very few understand that physics and science are equally important.*

- *a majority of the students believe they will complete a Bachelor's Degree with a high percentage intending to acquire a Master's Degree.*

- *an overwhelming majority of those polled intend to marry and have children.*

Summer Academic Practicum -- We plan to offer a two-fold program to enlighten academic faculty of current manufacturing practices.

Option 1 for the summer program will be similar to the Vocational Instruction Practicum. Faculty will be given the opportunity to shadow workers at manufacturing sites for one week and then submit a report detailing their experiences and how they will be able to integrate them in their classroom.

Option 2 will be a series of tours of local and area manufacturing plants. Faculty will be required to submit a classroom activity that integrates the concepts observed during each tour.

ILLINOIS STATE BOARD OF EDUCATION
DEPARTMENT OF ADULT, VOCATIONAL AND TECHNICAL EDUCATION
VOCATIONAL EDUCATION PROGRAM IMPROVEMENT SECTION

PRODUCT ABSTRACT

1. Title of material Tech Prep Three-Year Implementation Plan

2. Date material was completed June 17, 1991

3. Please check those applicable: New material X Revised material ____
Field-tested material ____

4. Originating agency Illinois Eastern Community Colleges Tech Prep Program

Address 305 North West Street, Olney, IL Zip Code 62450

5. Name(s) of developer(s) IECC Tech Prep Development Committee and Debra Hunter

Address 305 North West Street, Olney, IL Zip Code 62450

6. Developed pursuant to Contract Number 1-2307-529 SDA #23

7. Subject Matter (Check only one according to Dept. of Education Code):

Code
____ 01 Agricultural Education
____ 03 Bus., Mrktng. & Man. Occup.
____ 04 Distributive Education
____ 07 Health Occupations Education
____ 09 Home Economics Education
____ 10 Industrial Technology
____ 16 Technical Education
____ 17 Trade & Industrial Educ.
____ 22 Cooperative Education
____ Career Education
X Other (Specify) Tech Prep

8. Education Level

____ Pre-K Thru 6 ____ 7-8 X 9-10 X 11-12
X Post-Secondary ____ Adult ____ Tchr. (Inservice)
____ Adm. (Pre Service) ____ Other (Specify) ____

9. Intended for Use By:

____ Student X Classroom Teacher X Local Administrator
____ Teacher Ed. ____ Guidance Staff ____ State Personnel
____ Other (Specify) ____

10. Student Type:

____ Regular ____ Disadvantaged ____ Handicapped
____ Limited-English Profic. X Other (Specify) Middle 50% interested in Manufacturing Technology

11. Medium and Format of Materials:

X HARD COPY	___ VIDEOTAPE	___ FILM	___ MICROFICHE
No. of pages ____	___ Minutes	___ Minutes	___ B & W
X Paper bound	___ B & W	___ B & W	___ Color
___ Hard bound	___ Color	___ Color	
___ Loose-leaf	___ inches	___ mm	

Photos: Yes____ No X   Diagrams: Yes____ No____

___ Slides	___ Film Strips	___ Audio	___ Other
No. of frames____	No. of frames___	___ Automatic sync.	Specify:
___ B&W	___ B & W	___ Hz	_________
___ Color	___ Color	___ Manual cue	_________
___ Audio	___ Audio	___ Reel	_________
___ Carousel provided		___ Cassette	
___ Other packaging used		___ Cartridge	

(Specify)____________________

12. Availability:

___ One copy free   For Sale @ $____ per copy   X Not available

___ In ERIC system (No.______)   ____ Loan copy available

Contact: Name____ Phone (   )____________

Address____________________________________ Zip Code_____________

13. Copyright Restrictions:

Contact: Name____ Phone (   )____________

Address____________________________________ Zip Code_____________

14. What level(s) of assistance is required to provide implementation of this outcome?

X awareness   X understanding

_____ deciding   ______ implementing

15. Are Consultive/Inservice (or staff development) available? Yes___ No___

Contact:

Illinois State Board of Education
Department of Adult, Vocational & Technical Education
Vocational Educ. Program Improvement Section, E-426
100 North First Street
Springfield, Illinois 62777-0001
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet if necessary.)

The Tech Prep Three-Year Implementation Plan is designed to provide an outline for use by administrators and faculty at the pilot sites as they develop their Tech Prep program. The plan contains an overview of the district-wide implementation strategies, listed by year for three years. These strategies are followed by the curriculum outline for the three pilot high schools and college program plus the current course descriptions.

17. **Person Completing this Abstract** Debra Hunter

Full Address

Illinois Eastern Community Colleges

305 North West Street

Olney, IL **Zip Code** 62450

ILLINOIS STATE BOARD OF EDUCATION
DEPARTMENT OF ADULT, VOCATIONAL AND TECHNICAL EDUCATION
VOCATIONAL EDUCATION PROGRAM IMPROVEMENT SECTION

PRODUCT ABSTRACT

1. Title of material March Quarterly Report

2. Date material was completed April 15, 1991

3. Please check those applicable: New material ☒ Revised material ☐ Field-tested material ☐

4. Originating agency Illinois Eastern Community Colleges Tech Prep Program
   Address 305 North West Street, Olney, IL Zip Code 62450

5. Name(s) of developer(s) Debra Hunter
   Address 305 North West Street, Olney, IL Zip Code 62450

6. Developed pursuant to Contract Number 1-2307-529 SDA #23

7. Subject Matter (Check only one according to Dept. of Education Code):

Code
- ☐ 01 Agricultural Education
- ☐ 03 Bus., Mrktng. & Man. Occup.
- ☐ 04 Distributive Education
- ☐ 07 Health Occupations Education
- ☐ 09 Home Economics Education
- ☐ 10 Industrial Technology
- ☐ 16 Technical Education
- ☐ 17 Trade & Industrial Educ.
- ☐ 22 Cooperative Education
- ☐ Career Education
- ☒ Other (Specify) Tech Prep

8. Education Level

- ☐ Pre-K Thru 6
- ☐ 7-8
- ☒ 9-10
- ☒ 11-12
- ☒ Post-Secondary
- ☐ Adult
- ☐ Tchr. (Inservice)
- ☐ Adm. (Pre Service)
- ☐ Other (Specify)

9. Intended for Use By:

- ☐ Student
- ☐ Classroom Teacher
- ☒ Local Administrator
- ☐ Teacher Ed.
- ☐ Guidance Staff
- ☒ State Personnel
- ☐ Other (Specify)

10. Student Type:

- ☐ Regular
- ☐ Disadvantaged
- ☐ Handicapped
- ☐ Limited-English Profic.
- ☒ Other (Specify) Middle 50%

11. Medium and Format of Materials:

X . HARD COPY	___ VIDEOTAPE	___ FILM	___ MICROFICHE
No. of pages ____	___ Minutes	___ Minutes	___ B & W
X Paper bound	___ B & W	___ B & W	___ Color
___ Hard bound	___ Color	___ Color	
___ Loose-leaf	___ inches	___ mm	

Photos: Yes____ No X   Diagrams: Yes____ No____

___ Slides	___ Film Strips	___ Audio	___ Other
No. of frames____	No. of frames___	___ Automatic sync.	Specify:
___ B&W	___ B & W	___ Hz	_________
___ Color	___ Color	___ Manual cue	_________
___ Audio	___ Audio	___ Reel	_________
___ Carousel provided		___ Cassette	
___ Other packaging used		___ Cartridge	

(Specify)____________________

12. Availability:

___ One copy free   For Sale @ $____ per copy   X Not available
___ In ERIC system (No.______)   ____ Loan copy available
Contact: Name____Phone (   )____________
Address______________________________________Zip Code_______________

13. Copyright Restrictions:

Contact: Name____Phone (   )____________
Address______________________________________Zip Code_______________

14. What level(s) of assistance is required to provide implementation of this outcome?

_____ awareness   ______ understanding
_____ deciding   ______ implementing

15. Are Consultive/Inservice (or staff development) available? Yes___ No___

Contact:
Illinois State Board of Education
Department of Adult, Vocational & Technical Education
Vocational Educ. Program Improvement Section, E-426
100 North First Street
Springfield, Illinois 62777-0001
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet if necessary.)

The Quarterly Report is designed to provide progress information to state personnel and local Tech Prep administrators for the determination of the successful implementation of the grant objectives. The report details the activities during the three month period, January 1, 1991, to March 31, 1991, through a comparison to the procedures outlined in the grant. The report also provides copies of meeting minutes and other pertinent information located in the appendixes.

17. **Person Completing this Abstract** Debra Hunter

Full Address

Illinois Eastern Community Colleges

305 North West Street

Olney, IL **Zip Code** 62450

ILLINOIS STATE BOARD OF EDUCATION
DEPARTMENT OF ADULT, VOCATIONAL AND TECHNICAL EDUCATION
VOCATIONAL EDUCATION PROGRAM IMPROVEMENT SECTION

PRODUCT ABSTRACT

1. Title of material December Quarterly Report
2. Date material was completed January 10, 1991
3. Please check those applicable: New material X Revised material ___
Field-tested material ___
4. Originating agency Illinois Eastern Community Colleges Tech Prep Program
Address 305 North West Street, Olney, IL Zip Code 62450
5. Name(s) of developer(s) Debra Hunter
Address 305 North West Street, Olney, IL Zip Code 62450
6. Developed pursuant to Contract Number 1-2307-529 SDA #23
7. Subject Matter (Check only one according to Dept. of Education Code):

Code
___ 01 Agricultural Education
___ 03 Bus., Mrktng. & Man. Occup.
___ 04 Distributive Education
___ 07 Health Occupations Education
___ 09 Home Economics Education
___ 10 Industrial Technology
___ 16 Technical Education
___ 17 Trade & Industrial Educ.
___ 22 Cooperative Education
___ Career Education
X Other (Specify) Tech Prep

8. Education Level

___ Pre-K Thru 6
X Post-Secondary
___ Adm. (Pre Service)
___ 7-8
___ Adult
X 9-10
___ Tchr. (Inservice)
___ Other (Specify)___
X 11-12

9. Intended for Use By:

___ Student
___ Teacher Ed.
___ Other (Specify)___
___ Classroom Teacher
___ Guidance Staff
X Local Administrator
X State Personnel

10. Student Type:

___ Regular
___ Limited-English Profic.
___ Disadvantaged
X Other (Specify) Middle 50%
___ Handicapped

11. Medium and Format of Materials:

X HARD COPY	___ VIDEOTAPE	___ FILM	___ MICROFICHE
No. of pages ____	___ Minutes	___ Minutes	___ B & W
X Paper bound	___ B & W	___ B & W	___ Color
___ Hard bound	___ Color	___ Color	
___ Loose-leaf	___ inches	___ mm	
Photos: Yes____ No X	Diagrams:	Yes____	No____

___ Slides	___ Film Strips	___ Audio	___ Other
No. of frames____	No. of frames___	___ Automatic sync.	Specify:
___ B&W	___ B & W	___ Hz	________
___ Color	___ Color	___ Manual cue	________
___ Audio	___ Audio	___ Reel	________
___ Carousel provided		___ Cassette	
___ Other packaging used		___ Cartridge	

(Specify)____________________

12. Availability:

___ One copy free For Sale @ $____ per copy X Not available
___ In ERIC system (No.______) ____ Loan copy available
Contact: Name____Phone ( )____________
Address______________________________________Zip Code______________

13. Copyright Restrictions:

Contact: Name____Phone ( )____________
Address______________________________________Zip Code______________

14. What level(s) of assistance is required to provide implementation of this outcome?

_____ awareness _______ understanding
_____ deciding _______ implementing

15. Are Consultive/Inservice (or staff development) available? Yes___ No___

Contact:
Illinois State Board of Education
Department of Adult, Vocational & Technical Education
Vocational Educ. Program Improvement Section, E-426
100 North First Street
Springfield, Illinois 62777-0001
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet if necessary.)

The Quarterly Report is designed to provide progress information to state personnel and local Tech Prep administrators for the determination of the successful implementation of the grant objectives. The report details the activities during the three month period, October 1, 1991, to December 31, 1991, through a comparison to the procedures outlined in the grant. The report also provides copies of meeting minutes and other pertinent information located in the appendixes.

17. **Person Completing this Abstract** Debra Hunter

Full Address

Illinois Eastern Community Colleges

305 North West Street

Olney, IL **Zip Code** 62450

ILLINOIS STATE BOARD OF EDUCATION
DEPARTMENT OF ADULT, VOCATIONAL AND TECHNICAL EDUCATION
VOCATIONAL EDUCATION PROGRAM IMPROVEMENT SECTION

PRODUCT ABSTRACT

1. Title of material Rural Access to Technologies Final Report

2. Date material was completed June 30, 1991

3. Please check those applicable: New material X Revised material ___
Field-tested material ___

4. Originating agency Illinois Eastern Community Colleges Tech Prep Program

Address 305 North West Street, Olney, IL Zip Code 62450

5. Name(s) of developer(s) Debra Hunter and Tech Prep Committee Members

Address 305 North West Street, Olney, IL Zip Code 62450

6. Developed pursuant to Contract Number 1-2307-529 SDA #23

7. Subject Matter (Check only one according to Dept. of Education Code):

Code
___ 01 Agricultural Education
___ 03 Bus., Mrktng. & Man. Occup.
___ 04 Distributive Education
___ 07 Health Occupations Education
___ 09 Home Economics Education
___ 10 Industrial Technology
___ 16 Technical Education
___ 17 Trade & Industrial Educ.
___ 22 Cooperative Education
___ Career Education
X Other (Specify) Tech Prep

8. Education Level

___ Pre-K Thru 6 ___ 7-8 X 9-10 X 11-12
X Post-Secondary ___ Adult ___ Tchr. (Inservice)
___ Adm. (Pre Service) ___ Other (Specify) ___

9. Intended for Use By:

___ Student X Classroom Teacher X Local Administrator
___ Teacher Ed. ___ Guidance Staff X State Personnel
X Other (Specify) Tech Prep Committee Members

10. Student Type:

___ Regular ___ Disadvantaged ___ Handicapped
___ Limited-English Profic. X Other (Specify) Middle 50%

11. Medium and Format of Materials:

_X_ HARD COPY	___ VIDEOTAPE	___ FILM	___ MICROFICHE
No. of pages ____	___ Minutes	___ Minutes	___ B & W
_X_ Paper bound	___ B & W	___ B & W	___ Color
___ Hard bound	___ Color	___ Color	
___ Loose-leaf	___ inches	___ mm	

Photos: Yes____No_X_ Diagrams: Yes____ No____

___ Slides	___ Film Strips	___ Audio ___	Other
No. of frames____	No. of frames___	___ Automatic sync.	Specify:
___ B&W	___ B & W	___ Hz	________
___ Color	___ Color	___ Manual cue	________
___ Audio	___ Audio	___ Reel	________
___ Carousel provided		___ Cassette	
___ Other packaging used		___ Cartridge	

(Specify)____________________

12. Availability:

___ One copy free For Sale @ $____ per copy _X_ Not available
___ In ERIC system (No.______) ____ Loan copy available
Contact: Name____Phone (   )____________
Address____Zip Code______________

13. Copyright Restrictions:

Contact: Name____Phone (   )____________
Address____Zip Code______________

14. What level(s) of assistance is required to provide implementation of this outcome?

_____ awareness _____ understanding
_____ deciding _____ implementing

15. Are Consultive/Inservice (or staff development) available? Yes___ No_X_

Contact:

Illinois State Board of Education
Department of Adult, Vocational & Technical Education
Vocational Educ. Program Improvement Section, E-426
100 North First Street
Springfield, Illinois 62777-0001
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet if necessary.)

The final report for the FY 91 Illinois Eastern Community Colleges Tech Prep Program is designed to provide a description of the program objectives and the procedures used to accomplish them. The report contains information on the products produced and the resources utilized. A detailed account of the impact, problems and recommendations are also included. This report will provide a resource for the continuation of the Tech Prep program at Illinois Eastern Community Colleges.

17. Person Completing this Abstract Debra Hunter

Full Address

Illinois Eastern Community Colleges

305 North West Street

Olney, IL Zip Code 62450

SECTION C

Evaluation and Impact

IMPACT

The impact of this planning year has been wide and varying. The Tech Prep concepts have altered the thinking not only of the faculty and administrators working with the Tech Prep committees, but numerous people involved at the Tech Prep sites.

Teachers involved in the Tech Prep Development Committee have come willingly to the meetings even though this often meant more work for them due to the preparation needed for a substitute. Most of them expressed regret if they were unable to attend a meeting.

Many Development Committee members have experimented with applications in their classrooms this year. These teachers have seen their students more attentive and eager when working with application assignments than standard lessons. Plans for next year include increasing the use of applications.

The potential of applications and the Tech Prep program has enthused teachers. This enthusiasm is infectious and has spread to other teachers within the sites and has spurred many teachers to participate in the Tech Prep summer work-based and tour practicums. Those applying for the practicum programs have included foreign language, fine arts, and learning disability teachers, administrators, counselors and the targeted, academic faculty: English, math and science.

(See Appendix J for ideas on Tech Prep that were compiled by a Development Committee teacher.)

There has been a true "breaking down of the walls" between vocational and academic faculty: Development Committee teachers have been planning course content together; deals have been worked out in English departments for cooperative grading -- the English instructor grades the mechanics of papers and the vocational instructor grades the content; and team teaching ideas have been contemplated. These activities can be attributed to the new respect each area has for the other, most of which has been fostered in Tech Prep activities. The sowing of these relationships can be traced to the sharing of rides to Development Committee meetings by vocational and academic instructors.

The administrators at the sites are seeing the changes that are happening and are encouraged by the results. Gene Sams, Principal at Mt. Carmel, says that "Tech Prep is a start in getting vocational and academic teachers communicating with one another." Sandy Ward, Principal at Oblong High has this to say, "At Oblong High School, Tech Prep has impacted the curriculum in a most positive way. Teachers are more aware of applying academics to real life situations. We are experiencing a more cooperative effort in integrating academics and industrial technology."

Though it is impossible to identify all the areas that have been impacted by the Tech Prep planning year, you can see from the above examples that there has been a strong, positive influence from the Tech Prep program. The encouraging results from this year leads us to believe that next year will see more positive impact from Tech Prep.

SECTION D

Resource Listing

MATERIAL RESOURCES

BOOKS

Interfacing Math, Science and Technology, 1987.
The University of Texas at Austin $ 21.00

Integration of Mathematics and Science into Technology Education: A Holistic Approach to Education, 1988.
The University of Texas at Austin $ 10.00

Technology Education Poster Series, 1988.
The University of Texas at Austin 5 sets @ $5.00 = $25.00

Production Systems: Laboratory Activities, 1990
Laboratory Activity Guide and Student Learning Activities.
The University of Texas at Austin $ 28.00

Destination: Leadership - Training Manual and Leaders Guide, 1989.
The University of Texas at Austin $ 29.00

Methods and Materials for Teaching Occupational Skills
Curriculum Publications Clearing House $ 29.95

Pre-Employment Skills Curriculum Guide
Curriculum Publications Clearing House $ 10.50

Principles of Technology (14 video tapes, 28 student manuals, 28 teacher manuals)
Curriculum Publications Clearing House $ 924.00

Technology You can Build
Davis Publications, Inc. 4 copies @ $12.95 = $ 51.80

Creativity, Design and Technology
Davis Publications, Inc. 4 copies @ $11.95 = $ 47.80

The New Manufacturing Challenge
SME $ 29.95

Dictionary of Manufacturing Terms
SME $ 19.50

Poetry for Engineers from Engineers
SME $ 10.00

Robots in Inspection
SME No charge

Tech Prep/Associate Degree
NASDUTEC $ 35.00

SOFTWARE

The Incredible Laboratory, Wings for Learning	$ 70.20
Generic CAD 5.0, MicroWarehouse	$ 280.00
Grammatik IV Windows, MicroWarehouse	$ 55.00

VIDEO TAPES

Technology Revolution: Manufacturing of the '90's
DeAnza College video taped teleconference plus
seven copies

Critical Thinking and the Emotions, P.B.S. Video Tape
Critical Thinking and the Community College, P.B.S. Video Tape

Just-in-Time for America, Preview Tape
SME $ 10.00

Just-in-Time Production, Preview Tape
SME $ 35.00

APT Part Programming, Preview Tape
SME $ 25.00

NC/CNC, Preview Tape
SME $ 25.00

The New Manufacturing Challenge, Preview Tape
SME $ 25.00

Manufacturing Insights, Preview Tape
SME $ 10.00

Challenge of Manufacturing
SME $ 60.00

Three Axis CNC Milling
Bergwall Productions $ 199.00

HUMAN RESOURCES

PAID PARTICIPANTS:

Debra Hunter, Project Coordinator, Illinois Eastern Community Colleges

NON-PAID PARTICIPANTS:

Scott Edgar, Illinois State Board of Education
- Spoke to Development Committee about the State's concept of Tech Prep, 11-15-90.
- Presented the high points of the new legislation and Tech Prep, 02-20-91.

Jerry Corwin, Mt. Carmel High School's Industrial Technology Department Chair
- Presented Mt. Carmel's Technology Program to Development Committee, 12-11-90.

Becky Darling, Oblong High School English Instructor
- Presented information on Applied Communications to Development Committee, 02-05-91.

Lisa Baker, Cisne High School Guidance Counselor
- Assisted in curriculum outline, 02-20-91.

Walter Jones, Oblong High School Guidance Counselor
- Assisted in curriculum outline, 02-20-91.

Brenda Yates, Curriculum Revitalization Representative
- Presented information on curriculum packages and the need for curriculum integration, 02-20-91.

Jerry Ohare, State Board of Education
- Presented an overview of the Tech Prep program, 02-20-91.

Glenda Huffman, University of Illinois
Deborah Hlvana, University of Illinois
- Gathered information for State's Tech Prep Handbook, 04-19-91.

Larry D. Helsel, Assistant Dean/Chair, School of Technology, Eastern Illinois University
- Presented information on EIU's degree programs and their needs regarding Associate of Applied Science students, 04-19-91.

Linda Grace, Assistant Dean, College of Technical Careers,
Southern Illinois University at Carbondale
- Spoke on SIUC's degree programs and their Capstone Program, 04-19-91.

Jan Sutter, Administrative Assistant to the Chancellor, Illinois Eastern Community Colleges
- Reviewed FY 92 grant proposal, 03-18-91.

Bruce Ricklin, Tech Prep Director, Hoosier Area Vocational School, Bloomington, IN
- Tour and presentation of their program, 01-22-91.

Karl Uthman, Director of Research and Development for Vocational
  Training Programs at the Federal Institute for Vocational Training, Berlin, Germany
    - Presented information on the German Dual System, 05-08-91.

The BOARD OF GOVERNANCE who oversees the administration of the grant is:

Eula Adams, Director
  Clay/Jasper/Richland/North Wayne Delivery System

Scott Hamilton, Director
  Twin Rivers Regional Delivery System

James Taylor, Director
  Edwards/Wabash/Wayne/White Delivery System

Angelo Abbott, Dean
  Olney Central College

John Arabatgis, Dean
  Lincoln Trail College

Bob Boyles, Program Director, Adult and Continuing Education
  Frontier Community College

E. Kenton Peak, Director of Educational Services
  Illinois Eastern Community Colleges

Gene Sams, Principal
  Mt. Carmel High School

Bill Steichman, Superintendent
  North Wayne School District

Sandra Ward, Principal
  Oblong High School

The members of the DEVELOPMENT COMMITTEE who created the Tech Prep curriculum for Oblong, Cisne and Mt. Carmel are:

Cisne High School
  Charles Lane - Math Instructor
  Ken Feather - Vocational Instructor

Lincoln Trail College
  Dan Polgar - Math/Physics Instructor
  Lonnie Devin - CAD Instructor
  Bill Payne - Machine Shop Instructor

Mt. Carmel High School
- Kathie Flood - English Instructor
- Bill Geurin - Counselor
- Rodger Peterson - Vocational Instructor

Oblong High School
- Kurt Mowrer - Vocational Instructor
- Joe Bayless - Science Instructor

Olney Central College
- Bob Haney - Communications Instructor
- Jim Majernik - Automotive Instructor

Wabash Valley College
- Bob Effland - Electronics Instructor
- David Hunter - Electronics/Computer Science Instructor

The INDUSTRIAL ADVISORY COMMITTEE aided in determining the skills manufacturing employees will need for a productive and rewarding technical career. The companies and their representatives are:

Web Printing Controls
- Allen Endsley, Personnel Administrator

Snap-On Tools
- Donald Dunkel, Total Quality System Manager
- Tom Wood, Operator

Thordarson-Meissner, Inc.
- Nancy Garrett, personnel

Pioneer Labels, Inc.
- Phil Freeman

E. H. Baare Company
- Mike Uptmore, Production Control Manager

Indian Refining
- Jim Thompson, President

Oak Valley Wood Products
- Jeffrey Watson, Vice President

Sunbeam Plastics
- Denise Terveer, Human Resource Assistant

Pacific Press and Shear
- Bob Wonsetler, Executive Vice President of Engineering

Champion Laboratories
Ron Burger, Manager Tool Engineering

Hella Electronics Corporation
Jerry Botkin, Production

Sparton Manufacturing
Mike Knapp, Director of Employee Relations

Amax Coal
Tom Schnell, Industrial Relations Representative

Carmi Molded Rubber
Dennis Jacobs, Human Resource Manager

Emerson Radio Corporation
Brenda Vatlin, Technical Manager

Leaf, Inc.
John Collier, Personnel and Training Supervision

SECTION E

Problems

PROBLEMS

It took more time to indoctrinate the members of the Development Committee into the ways of modern manufacturing than the grant writers had anticipated. Because we felt that it is imperative for those developing the foundation for the Tech Prep curriculum be well versed in current manufacturing technology trends, we chose not to rush this process.

This initial delay caused subsequent delays within the grant. Those deadlines that were missed are:

Industrial Advisory Council Formation
Model Program Review
Review of Current Courses
Development of Course Sequence
Curriculum Approval
Entrance/Exit Requirements
Equipment Needs List
Implementation Plan Development
Review of Implementation Plan by Outside Evaluator
Articulation Agreement
Board Approval of Curriculum

The procedures that were not accomplished due to the delay are:

Faculty Development Plan
Though faculty development occurred, a formal plan was not developed.

Distribution of the Implementation Plan
This was not accomplished because the Implementation Plan was not approved by the Board of Governance until school had dismissed for the summer.

Creation of a Student Brochure
It was decided not to produce a brochure until the curriculums for each pilot high school were developed. This was not completed until May, '91. There was, at that point, not enough time to effectively utilize a brochure and the plans were tabled until FY 92.

Mentors proved to be difficult to bring together. There was confusion as to their role which translated into a reluctance by the Development Committee to approach prospective mentors. There was also apprehension about mentors approaching students without having program specifics. Due to these problems, mentors were not selected during this year. Awareness campaigns for students were carried out during the funded year. It is hoped that mentors can be cultivated next year and assist in the student awareness programs.

SECTION F

Conclusions and Recommendations

CONCLUSIONS AND RECOMMENDATIONS

The Tech Prep Program has provided a conduit for curriculum improvement. It has fostered fruitful relationships between vocational and academic instructors that have lead to an increase in respect for each discipline. These changes have reinstilled an enthusiasm for education that is having a positive impact on the entire Tech Prep site.

It is recommended that the Tech Prep efforts be continued in the Illinois Eastern Community Colleges District. It is suggested that these efforts be increased to include additional sites and subject areas. It is further suggested that students become more actively involved in the Tech Prep program through the implementation of applied curriculums. These efforts should be augmented by a structured, active marketing campaign that will target students, their parents and area businesses.

SECTION G

Publicity

TECH PREP CORRESPONDENTS

These people have requested and received information about our Tech Prep program:

Mr. Anthony Molina, Sr.
Tech Prep Program Developer
Delgado Community College
615 City Park Avenue
New Orleans, LA 70119

Man-hong Jiu, Professor
Illinois Central College
One College Drive
East Peoria, IL 61635

Thomas Aldridge
Wabash Valley College Student
P. O. Box 43
Mt. Carmel, IL 62863

Nancy Cooper
Center for Business and Community Development
Richland Community College
One College Park
Decatur, IL 62521

Ruth Patton
Coordinator, National Tech Prep
Clearinghouse of Resources
The National Network for Curriculum Coordination
in Vocational and Technical Education
East Central Region
Sangamon State University, F-2
Springfield, IL 62794-9243

Glenda Huffman, Project Coordinator
Deborah Hlavna, Research Associate
Department of Vocational and Technical Education
University of Illinois at Urbana-Champaign
345 Education
1310 South Sixth Street
Champaign, IL 61820

TWIN RIVERS NEWS

A publication of Twin Rivers Regional Vocational System

Volume III Winter 1990

RECEIVED
DEC 21 1990
ILLINOIS EASTERN COMMUNITY COLLEGES

Serving Vocational Education in Crawford and Lawrence Counties

Hutsonville
Community District #1

Robinson
Community District #2

Palestine
Community District # 3

Oblong
Community District # 4

Red Hill
Community District #10

Lawrenceville
Community District #20

Scott Hamilton
Director

Mille Runyan
Special Projects Coord.

Claudia Welty
Admin. Secretary

Jane McConaughay
Secretary

TECH PREP AT TWIN RIVERS

Twin Rivers is part of a joint effort between Illinois Eastern Community Colleges (IECC) and two other regional systems to develop a Tech Prep program in Manufacturing The Tech-Prep program will be an integrated program of studies that stresses a blend of vocational and academic courses to prepare students to enter a technical program at the community college upon graduation from High School. At the High School level students will take math and science and communications courses as well as vocational training related to manufacturing. Once the student completes their two-year technical training at the community college they will be prepared to enter the workforce as a technician or go on to complete a four-year degree. Tech Prep is a response to employers demands for more skilled workers who can not only do the job but have the ability to communicate, solve problems, work cooperatively and apply knowledge learned in school and the workplace.

Students in the Tech Prep program will take a blend of theoretical and applied studies which will prepare them not only for entry level employment but higher level jobs with higher pay rates and opportunities for advancement. An important aspect of Tech-Prep will be the involvement of local industry not only in an advisory capacity but also actively participating in the students development. At the post-secondary level students will have the opportunity to work as interns in an on-the-job training experience at an industrial site. This practical training will give students the opportunity to gain first hand experience that will be very valuable in helping them make career decisions. Internship will also give employers first chance at hiring qualified technicians after trying them out as interns.

Because of the large geographical area and the number of High Schools in the IECC district, three Pilot Sites have been selected to implement the Tech-Prep program. In the Twin Rivers Regional System, Oblong High School has been selected as the Pilot Site. Sandra Ward, Principal at Oblong sees Tech-Prep as not only a good opportunity for students but a chance to improve curriculum overall. "I see this (Tech-Prep) as not only an opportunity to upgrade our vocational program but to review curriculum in other areas as well," says Ward.

Updating equipment in the industrial lab to reflect current technology will be another facet of improving the manufacturing curriculum. Oblong has already begun this process by purchasing CAD workstations to establish a small CAD lab in the drafting dept. In addition to CAD, students in the Tech Prep program will get hands on training in CAM

WHERE WE LEARN TO EARN

BEST COPY AVAILABLE

Tech Prep - Upgrading curriculum, fostering cooperation

through the use of a CAM workcell purchased through the Regional System and shared cooperatively by the six schools in the Region

The 1990/91 School Year will be an organization and planning year for Tech-Prep with implementation of the program in 91/92. Debra Moll has been hired as Tech-Prep coordinator and will be working with IECC, the Regional Systems and local industry to establish Tech-Prep in the IECC district. Debra's office is located at Olney Central College which is centrally located in the 12 county area encompassed by IECC. The goals for this planning year according to Moll are

- formulating employer skill standards
- developing curriculum in CAD/CAM, electronics and machine tool technology
- marketing Tech-Prep to students, employers and the community
- updating instructors' knowledge of modern industrial technologies and management practices.

Funding for the program is provided in part by a $35,000 grant administered through the Illinois State Board of Education Dept. of Adult and Vocational Technical Education and funded jointly by the Illinois Manufacturers Association and JTPA.

INTEGRATION: GETTING THE WORD OUT!

Increasing awareness of integrating academic and vocational curriculum

Integration of academic and vocational curriculum is the "hot" topic in vocational education this year. A look at the agenda of most any major meeting of vocational educators will include at least one if not more sessions on this topic. Getting the word out to teachers on the "front line" has been the focus of inservice activities at Twin Rivers this year. In August all the vocational teachers attended one of two pre-service workshops which focused on the pros and cons of integration and discussed among themselves possibilities for implementing integration at their schools. On October 5th Dr. Chris Roegge from the University of Illinois presented research findings and integration models to a large group of academic and vocational teachers and guidance counselors at the Two County Teachers Inservice. Actual implementation of an integrated program will take place at Oblong High School as part of the Tech-Prep pilot site activities. Teachers at Oblong will work together to review curriculum, recommend changes, and implement an integrated program of studies. Teachers will also be given time to update their knowledge of the latest manufacturing techniques through industry tours and internship activities. Other activities will include attendance as a team at a national conferences on integration or other selected workshops.

Since the integration awareness activities have begun many teachers have pointed out that informal integration activities have been taking place between faculty members at their schools for years. In fact, integration is in many ways just good teaching. Most teachers realize that students have not really mastered knowledge learned in class until they have demonstrated their ability to apply that knowledge. Formal integration plans are, to put it simply, a means to break down barriers between departments and provide time for teachers to work together and coordinate their programs. The end result of integration is a student that can take the knowledge gained in the classroom or lab and apply it in the real world.

"WHERE WE LEARN TO EARN"

BEST COPY AVAILABLE

Tech Prep challenges students

By: Michelle Patterson
Staff Writer

Due to dramatic changes in technology, busineses are demanding technically qualified employees to maintain a competive edge in National as well as International relations.

A new program (to help students learn skills in the technical area, communications, computation, problem solving and critical thinking) called Tech Prep has been introduced to the Illinois Eastern Community Colleges area.

Tech Prep is designed to meet the educational challenge of these technological changes. Educating and training such a work force requires cooperation and integration of vocational-technical educators, academic educators and business. The proposal was the result of a cooperaative effort among Illinois Eastern Community Colleges Staff; area business leaders and Directors of three area Regional Vocational Systems, Jim Taylor, Mary Beth Stine and Scott Hamilton.

The local Tech Prep Organization has recieved a planning grant for the fiscal year 1991. The program will include Illinois Eastern Community Colleges. The three pilot high schools which have been selected to develop Tech Prep models are Cisne High School, Mt. Carmel High School, and Oblong High School.

Tech Prep represents an educational track that integrates college course work with technical education. It is a planned sequence of courses, both academic and technical that begins in ninth grade and continues to an Associate degree.

The director who heads the district is Debra Hunter. She now has an office on the OCC Campus.

OCC Lamplighter

WABASH VALLEY COLLEGE
Over A Quarter Century Of Excellence
2200 COLLEGE DRIVE / MT. CARMEL, IL 62863 / 618-262-8641

An Illinois Eastern Community College

RECEIVED
BY
MAR 6 1991
ILLINOIS EASTERN
COMMUNITY COLLEGES

MEMO TO: Debra Hunter
FROM: Louise Acree
RE: WVC Journal-TV Show
DATE: February 27, 1991

Thank you so very much for appearing as a guest on my weekly WVC Journal-TV program.

It was so good of you to take time from your busy schedule to accommodate my request to have you on our show. I hope that you enjoyed being a guest as much as I enjoyed having you. It was an interesting and enjoyable 30 minutes.

Thanks again!

LA:pw

IECC, three Regional Vocational Systems awarded Tech Prep grant

Illinois Eastern Community Colleges and the Regional Vocational Systems for Cisne, Mt. Carmel and Oblong high schools have been awarded a Tech Prep grant by the Illinois State Board of Education.

The purpose of the grant is to create a Tech Prep curriculum in Southeastern Illinois. The grant was one of just 18 in Illinois awarded under this program.

Advancements in technology have brought extensive changes to the workplace. Concepts like computer integrated manufacturing, work cells, total-quality control, just-in-time inventory control, computer-aided machining and participatory management, to name a few, have become common place in today's corporate settings.

These changes demand a labor force that possesses not only advanced technical skills, but strong academic and interpersonal skills plus a willingness to continue to learn.

Tech Prep is designed to meet the educational challenge of these technological changes. Educating and training such a work force requires cooperation and integration of vocational-technical educators, academic educators and business.

The successful proposal was the result of a cooperative effort among IECC staff; area business leaders; and the directors of three area Regional Vocational Systems, Jim Taylor, Mary Beth Stine and Scott Hamilton.

Tech Prep represents an educational track that integrates college preparatory coursework with technical education. It is a planned sequence of courses, both academic and technical, that begins in ninth grade and continues through community-college courses leading to an associate degree.

Because Tech Prep prepares students for a lifetime of learning, it also provides preparation for advanced education such as a four-year baccalaureate degree.

Tech Prep also prepares students with the skills and competencies necessary to meet employers' performance standards, not only for entry-level jobs, but also for career advancement.

The local Tech Prep consortium has received a planning grant for fiscal year 1991. The three pilot high schools which have been selected to develop Tech Prep models are Cisne, Mt. Carmel and Oblong high schools. These schools' faculty plus representatives from IECC and area manufacturers will be creating a sequence of courses that Tech Prep students will follow starting in the 11th grade and concluding with an associated degree from Illinois Eastern Community Colleges.

Additional goals for this planning year are: integrating academic and vocational teaching practices, creating entrance and exit requirements for Tech Prep students, developing working relationships with local industries and education deliverers and formulating a three-year implementation plan.

Albion Paper

BEST COPY AVAILABLE

APPENDIX A

Board of Governance Meeting Minutes

AGENDA

TECH PREP MEETING

October 10, 1990

Review Proposal
- Clarify language
- Overall direction

Review Budget
- What are their ideas for expenditure
- Accessing monies

Review Time Sequence

Review Responsibility Lists

Determine High Schools

Determine Development Committee
(or set date for selection)

Minutes of meeting of
Tech-Prep Board of Governance
October 19, 1990

Introduction of members and guests: The meeting was convened by Debra Moll at 12:30pm in the Board Room on the campus of Olney Central College. Members present included Eula Adams, Debra Moll, Scott Hamilton, James Taylor, Bob Boyles, John Arabatgis, Angelo Abbott, Dwight Mobley, and Kenton Peak. Guests were Gene Sams and Bill Steichmann.

Election of officers: The first item of business was the election of officers for the Board. Following considerable campaigning by a number of candidates, Scott Hamilton was elected president and Dwight Mobley was elected Secretary.

Development Committee: Under the direction of newly elected president Hamilton, the members reviewed the requirements and duties of the Development Committee. Debra Moll informed the Board that the Development Committee and the Industrial Advisory committees are to be in operation by October 31, 1990.

It was requested that the three secondary pilot centers have representation on the committee to include faculty from the math, science, english, and vocational-technical departments. The areas of concentration for IECC Dist. 529 include:

Frontier - Quality Assurance.
Lincoln Trail - Machine Shop Trades and CAD-CAM.
Olney Central - Cabinet Making and Welding
Wabash Valley - Electronics Tech.

After much discussion, it was agreed that each school (secondary and post secondary) will send to the director a list of two or more faculty members. From this total list of faculty, the director will select seven members representative of all areas of instruction. Each school should provide, in addition to the name of the faculty member, their area of interest, and any additional information that might prove helpful. This list should be forwarded to Debra by Monday, October 29. Each institution is also asked to have their faculty elect a single representative from their institution.

Each institution will be notified by October 31 as who their representative is. Each institution will, in turn, indicate to her whom their elected representative will be. This should provide a total of 14 members for the Development Committee.

It was suggested that the first meeting of this new committee be on Monday, November 5, 1990, starting at 12:30 in the

Banquet Room at Olney Central College. The meeting should start with a luncheon followed by a general orientation to the project. A packet of information should be available for each participant. Members of the Governance Board are invited to attend.

Director's Report: During the last two weeks, the Director has visited two Board of Control meetings. She has also visited two pilot center schools--Mt. Carmel and Oblong. Three industrial sites were visited to explain the Tech-Prep project--Snap-On Tools of Mt. Carmel, Leaf, Inc. of Robinson, and Briggs Mfg. of Robinson. The Director will be attending the SME conference in Chicago October 22-23. While in the Chicago area, she plans to visit project directors at Rainey Harper and Elgin Community Colleges.

Each cooperating secondary and post-secondary school has been asked to provide the Director's office with a copy of their school catalog and school calendar for her use in planning visits and meetings.

Industry Information Sheet: The Industry Information Sheet that the Director plans to distribute was presented, discussed by the Board and approved for distribution.

Letterhead: The Board directed Debra to develop a letterhead and proceed to have a sufficient supply printed for office use.

Recognition: A motion was made and approved giving Debra a vote of confidence in her leadership efforts on this project up to the present time.

Next Meeting: The date of the next meeting will be determined as needed and notice of the meeting will be sent to each board member.

The meeting adjourned at 2:00pm.

ME Mobley
Secretary

TECH PREP
Board of Governance Meeting Minutes
Olney Central College, Banquet Room
February 11, 1991 - 1:30 p.m.

Members Present: Eula Adams, Mary Beth Stine, Scott Hamilton, Angelo Abbott, Gene Sams, John Arabatgis, Kenton Peak, Bob Boyles, Sandy Barbre for Jim Taylor, and Debra Moll Hunter, Director

Debra reviewed the Tech Prep program up to the present time. Information on the Hoosier Hills Area Vocational School tour was also distributed. A handout listing the goals for the Tech Prep program was distributed to Board members present.

One hundred thirty-four (134) area industries have been contacted to request information regarding individual companies. At the present time, three companies have responded. The materials received can be used for curriculum development only--not for general publication.

A news release has been sent to area newspapers publicizing the Tech Prep program.

The next Tech Prep Development Committee meeting will be held on February 20, 1991. The meeting will begin with a tour at Cisne High School. The tour will then proceed to Fairfield where the remainder of the meeting will be held at the Wayne County Bank. Meeting time is from 9 a.m. to 3 p.m. (See Attachment A for agenda)

A meeting for Tech Prep project directors and counselors will be held at the Illinois State Board of Education on March 5, 1991 beginning at 9:30 a.m. The meeting is scheduled to last until 3:00 p.m. with a working lunch. Guidance counselors from both a secondary and a post secondary school involved with this project are invited. There will be a registration fee of $10.00 which includes coffee, rolls and lunch. Preregistration is to be completed by February 22, 1991. (See Attachment B for the Agenda) Debra will contact counselors and distribute the agenda to Board of Governance members.

Scott Hamilton recommended that the Board go to the Tech Prep conference being held at Jumer's Chateau in Bloomington, Illinois on June 13 and 14. The Conference is to assist local agency personnel in planning and implementing educational programs which will integrate curriculum and therefore improve students' preparation for work and/or further education. Further details will be available at a later date.

One area that Debra will check on will be articulation agreements with four-year institutions--Southern, Eastern, etc. Also by the end of this year, the Director will complete the following:

1. A Tech Prep curriculum that specifies what students will be taking from 9 to 12th grades. Articulation will be completed with the community college.

2. A specific area will be programmed into each participating high school.

3. Publicize Tech Prep and begin working with teachers. It was suggested that a workshop could be held in late April.

4. A marketing plan will be presented to the Board. The marketing plan

will be as wide and diverse as possible. Communication will be developed for all three project high schools, four community college campuses, and school boards of education.

5. A Tech Prep day will be designed to present information to high school students. A variety of information will be available.

Debra reviewed the budget amendment changes that she was proposing. Motion by Scott Hamilton, and second by Mary Beth Stine to approve the budget changes pending verification of SURS liability. All ayes. Motion carried.

The meeting was adjourned at 3:30 p.m.

Submitted by,

Sandy Barbre

Sandy Barbre, Acting Secretary
for Dwight Mobley

A:TechPrep.MIN

TECH PREP
Board of Governance Meeting
Olney Central College, Board Room
March 18, 1991

The meeting was opened by Debra Hunter at 2:30 pm. Members present: Eula Adams, Mary Beth Stine, Angelo Abbott, John Arabatgis, Kenton Peak, Robert Boyles, Jim Taylor and Dwight Mobley. Jan Sutter was present as consultant.

Debra gave a quick review of progress with the Tech-Prep program. She requested names of people to attend a workshop at Itaska, Illinois on May 6-7, which will be studying manufacturing techniques used in Germany. Those agreeing to attend were Jim Taylor, Dwight Mobley, and one instructor from the WVC campus.

Possibilities are good that this group will be getting up to $10,000.00 for the VIP program for the summer for our academic instructors participating in the Tech-Prep program. Final paperwork must be submitted showing how this money will be used. Participants will be those instructors and administrators not eligible for other forms of VIP. Suggestions were made to have (1) a series of tours to businesses in our area throughout the summer, and (2) follow the same concept as the regular vocational VIP participant requiring at least one week of actual work experience in an industry. Suggestion (1) seemed to be the most practical one. It will require a formal writeup summarizing the events observed and how these could be worked into their classroom activities. Additional information will be drafted by Debra and distributed to this board.

Debra is working with Jan on a grant refunding proposal that could qualify us for an additional $20,000.00 provided we plans can be submitted showing that we are meeting objectives of this year's grant.

Discussion centered upon the need of adding another program separate from manufacturing for tech-prep. The one receiving most favorable acceptance was business occupations. Additional high schools also need to be identified as participants.

Articulation with the colleges of IECC is another activity that needs to be done this year

Our written proposal for the next year must be submitted by April 15. Budgeting for next year was discussed.

The next meeting of the Board is scheduled for April 3 at Olney Central. The meeting was adjourned at 4:30.

Dwight Mobley, Secretary

TECH PREP
Board of Governance Meeting
Olney Central College, Room 108
April 3, 1991

The meeting was called to order by Scott Hamilton at 1:45pm. Board members present were Bob Boyles, Jim Taylor, Eula Adams, Gene Sams, Bill Steichman, Kenton Peak, Angello Abbott, Scott Hamilton, Debra Hunter, and Dwight Mobley.

Boy Boyles moved, seconded by Eula Adams, to accept the minutes of the previous meeting of the Board. The motion carried.

The Refunding Proposal was presented by Debra. The proposal allows for the addition of six new high schools--three as pilot centers for a new Business Technology program and three high schools that may choose either Business Technology or Manufacturing Technology. These will be divided equally among the three regions.

The major objectives of the proposal were discussed. These objectives are:

1. Begin the implementation process of the Tech Prep Manufacturing Technology curriculum at the three original pilot high schools.
2. Develop a 4 + 2 Tech Prep curriculum in Business Technology in at least three pilot high schools that articulate with Illinois Eastern Community Colleges programs. The emphasis of this curriculum will be on improving math communication and science skills through the use of integration and applications.
3. Target three additional high schools as pilot sites for either the development of the manufacturing technology or business technology curricula.
4. Develop a three-year implementation plan for the business technology curriculum.
5. Review and modify the manufacturing technology implementation plan developed in FY 91.
6. Provide staff development for teachers and counselors
7. Develop a listing of resource needs, both human and equipment, and an allocation plan.
8. Develop a marketing campaign that explains the benefits of the Tech Prep program to students, parents and the community.

9. Develop articulation agreements with Illinois state universities and IECC for Tech Prep curriculums.

10. Develop a work-based component for each Tech Prep program.

11. & 12. Evaluate and disseminate Tech Prep activities.

There was some discussion of the activity flow chart that is to be followed in implementation of the proposal. Scott reminded the group that task lists have already been developed for business and should be used by the Advisory Council.

The proposed budget for FY 92 was presented for discussion. A motion was made by Jim Taylor, seconded by Eula Adams, that the coordinator's contract be increased to a 12 month contract and the title be changed to Program Director. The motion carried. The budget was further edited to eliminate the line items for full time secretary/benefits, and teacher's stipends; and to add line items for Marketing and for Substitute Teacher Salary. A motion was made by Eula Adams and seconded by Jim Taylor that final adjustments be made to the Budget for FY 92 by Debra and submitted to Kenton Peak and Scott Hamilton for final approval.

The forms for the Tech-Prep VIP were distributed and discussed. Participants will be selected from faculty and administrators of the pilot center high schools and colleges of the district. April 26 has been set as the deadline for returning the applications to the proper office. The Governance Board will evaluate the applications and approvals will be made to use the available funds. This selection will be made at a meeting on May 2, 1991 at 12:00pm in the banquet room at OCC.

A motion was made by Jim Taylor and seconded by Eula Adams instructing Debra to add to the grant proposal a stipulation that an advisory committee representing all five vocational areas be formed as an overall Tech-Prep Advisory committee. Motion carried.

A motion was made by Kent and seconded by Eula instructing Debra to proceed to submit the grant proposal for FY 92 as edited. Motion carried.

A motion was made by Bob Boyles and seconded by Jim Taylor to adjourn the meeting. Motion carried.

Submitted by:
Dwight Mobley
Dwight Mobley, Sec'y.

TECH PREP
Board of Governance Meeting
Olney Central College
May 2, 1991

The meeting was called to order by Scott Hamilton. The motion to accept minutes of previous meeting was made by Kenton Peak and seconded by Eula Adams. Motion carried.

Tech Prep Instructor Practicum

As of this date, May 2, applications had been received from 11 for job shadowing and 7 for the tours.

Tour bus rates for tours to various locations was presented by Debra. Transportation cost for three trips would amount to about $1324.00.

There is a total of $10,000.00 budgeted for the VIP program. The final report is due August 16.

Dates set for the tours all occur on Fridays: June 21, July 12, July 26, and August 2.

A motion was made by Jim Taylor, seconded by Angelo Abbot, to approved those applications received as of May 2. Motion carried.

A motion was made by Eula Adams, seconded by John A. to extend the deadline for VIP applications for the tours and the workplace to May 17.

Final reporting will include statements from the work place supervisors and a synopsis of each tour by each applicant. Official forms will be prepared by Debra and distributed to all applicants.

Potential Resource Materials:

Debra distributed a listing of selected training materials for consideration. Schools are encouraged to make recommendations if they now have any of this material. Debra will discuss resource materials with the Development Committee before ordering any materials.

Summer Faculty/Staff Development:

The next state workshop to consider is "Connections '91 Conference" June 14-14, in Bloomington, IL.

Selection Procedure for the New Pilot Sites:

Scott will prepare application forms to be distributed to prospective schools. The application deadline will be

August 23, 1991. We are to select two sites in each of the three regions.

Articulation Agreements:

More specific information needs to be obtained from DAVTE regarding objectives to be achieved with articulation.

A motion was made by Sandra Ward, seconded by Angelo Abbott to adjourn the meeting. Motion carried.

The next meeting will be scheduled for June 17 at OCC.

M D Mobley
Secretary

TECH PREP
Board of Governance Meeting
Olney Central College
June 17, 1991

The meeting was called to order by Debra Hunter. Board members present included John Eula Adams, James Taylor, John Arabatgis, Bob Boyles, Kenton Peak, Gene Sams, Bill Steichman, Sandra Ward, and Dwight Mobley. It was announced that Scott Hamilton has relocated and his replacement has not been named as of this date.

Kenton Peak moved, seconded by Eula Adams, that the minutes of the previous meeting be accepted as presented. Motion carried.

Three Year Implementation: Debra distributed copies of the Three-year Implementation Plan that she has prepared. Jim Taylor moved, seconded by Kent Peak, that the plan be accepted by the board as presented. Motion carried.

VIP Program: A tour schedule was distributed to members and discussed. The first tour is scheduled for June 21 and 16 people have registered for it. Three tours have been finalized (June 21, July 12, and August 2). The fourth scheduled tour is still being planned for July 26.

Final Report: The outline of the final report for FY-91 was distributed and discussed. The completion date is scheduled for June 30. Submission to the state office must be completed before July 31. Approval by this board should be made during a meeting on July 22 at 12:00 noon at Olney Central College.

SREB Conference: A motion was made by Eula Adams, seconded by Sandra Ward, to send three people to the SREB Conference in Tampa, Florida, July 9-13, and to reimburse the necessary expenses. Motion carried.

Tech-Prep Articulation Agreement: A working copy of a Tech-Prep Articulation Agreement was presented by Kenton Peak and discussed. Further action was tabled.

Eula Adams moved that the meeting be adjourned. It was seconded by Bill Steichman. Motion carried.

M D Mobley
Secretary

APPENDIX B

Development Committee Meeting Minutes

DEVELOPMENT COMMITTEE MEETING
MINUTES

November 15, 1990

Olney Central College Banquet Room

The meeting was opened with the introduction of Scott Edgar from the Illinois State Board of Education. Mr. Edgar covered the basic grant, and then answered questions from the Committee.

The following officers were elected unanimously:

Debra Moll - Chairperson
Bob Haney - Group Spokesman
Kurt Mowrer - Secretary

The expectations of the Development Committee and its officers were discussed.

Following is a list of companies that will be contacted for appointment on the Industrial Advisory Council:

E. H. Baare - Robinson - Production Control Manager
Web Printing Controls - Fairfield - Allen Endsley, Personnel Manager
Champion Labs-Albion and West Salem-Ron Burger, Personnel
Swanson/Nunn - Evansville - Chuck Dehner, Sales Person
Evansville Supply - Evansville - John Breunig, Sales Person
Roadmaster - Olney - Ed Shake, Management
    Robert Grove, Floor Person
Foxwood Manufacturing & Distributing, Inc. - Olney -
    "Buddy" Gayer, Owner
    Sandy Miller, Management
Snap-On - Mt. Carmel - Donald Dunkel, TQS Manager
    - Tom Sarg, 3rd Shift Machinist
Airtex - Fairfield - Richard Shook, Floor Supervisor
Sunbeam - Flora - Rosemary Tackitt - Quality Control
Hella - Flora - Jerry Botkin, Floor Person
Illinois Oil - Lawrenceville - Jim Thompson, President
Oakwood Products - Olney
Thordanson/Misner - Mt. Carmel - Nancy Garrett, Personnel
Yale South Haven Products - Carmi - Donald Shiever, General Manager
Union/Frondenberg - Olney - Jim Pottorff, Vice President
Amax Coal - Keensburg - Tom Schnell
Leaf - Robinson - Personnel
Pacific Press - Mt. Carmel - Bob Hurt, Plant Manager
Victor Dana - Robinson - Harry Whited, Plant Manager

KKC - Olney - Andy Schuetz, Owner
Pioneer Label - Robinson
Spartan Manufacturing - Flora - Steve Hubbel,
Vice President
Emerson - Princeton, Indiana - Brenda Vatlin,
Production Manager

Debra will send a letter to general managers asking for their involvement. Also letters of invitation will be sent to council members.

High schools are to send curricula and course descriptions to Debra.

At Debra's suggestion, meetings will be held at other high schools with planned plant tours to follow. Mr. Jim Taylor volunteered to host the next meeting on December 11, 1990, 8:30 a.m., Mt. Carmel High School.

The tentative AGENDA is as follows:

- Course Descriptions (Please send 20 copies of each high school's course descriptions and curriculum outlines to Debra.)
- Elgin's Program and Others
- Surveys
- Sub-committees
- Tour, Mt. Carmel High School
  Wabash Valley College
  Snap-On Tools

Kurt Mowrer, Secretary

TECH PREP MEETING

December 11, 1990

At 12:30 p.m., the meeting was opened by Bob Haney due to Debra Moll attending a Tech Prep meeting in Chicago. Two guests were present, Regina Paddick and Sandy Barbre, who was representing Jim Taylor. Dan Polgar was absent because of teaching duties.

Minutes of the last meeting were approved.

Jerry Corwin, Department Chairman, presented Mt. Carmel's Industrial Technology Program. Energy: Mr. Winterenheimer; Transportation: Rodger Peterson; Communications: Jerry Corwin; and Manufacturing: Mr. Cooper

Everyone enjoyed the a.m. tour of Snap-On Tools. Mr. Don Dunkel guided the group. Education was stressed, particularly the 3 R's. Math through trigonometry is important. Weak areas seem to be fractions, reading levels and ability to communicate. It will cost Snap-On approximately one million dollars this year to retrain 40 people.

High school curricula were reviewed. Bill Geurin mentioned that Mt. Carmel cannot set up special classes. Bob Haney stated that Oblong and Cisne have different problems. In both, all classes are taught by one teacher. Mr. Geurin felt that the feeder system is important for funding. Joe Bayless asked how the science department interacts with the program. Bill Geurin commented that that is a portion of Tech Prep's purpose. Courses differ in size and amount of electives offered.

Bob Effland asked if the community colleges could help the high schools. Kurt Mowrer thought it would be good if the students could take classes at the community colleges as they do in the Elgin program.

In discussion of the program, it was agreed that Elgin has the social and population industrial base to support a good program. The other programs are similar to what we would be like.

The Advisory Council list was given to the members. Discussion of support was confirmed and unanimous approval was given.

Bob Haney stated that mentors need to be chosen by January 11. Each school should have three: a teacher, parent and student.

The Bloomington trip is scheduled for January 22, 1991. The gathering point was debated, but will wait for direction from Debra.

The January 16 teleconference details will be announced later. It is recommended that all advisory council members attend. More information is needed, i.e., are students invited.

Newsletter items should be submitted to Debra when possible.

The next meeting is scheduled for February 5, either at Oblong or Robinson. Details will be announced.

The meeting was adjourned at 1:35 p.m. and an enjoyable tour of Wabash Valley College followed.

TOUR

Hoosier Hills Area Vocational School

Bloomington, Indiana

On January 22, 1991, the Development Committee visited the Hoosier Area Vocational (HAV) School in Bloomington, Indiana, to see a Tech Prep program in action. We were greeted by Bruce Ricklin, Tech Prep Director. He also gave us a presentation on his program. The following are highlights of the visit:

- The Tech Prep program was legislated by the state, five sites were selected.
- HAV is used by two high schools, approximately 1500 students each.
- Indiana University will not accept any class work if class title includes the words practical, applied, or technical.
- Program aimed at general education group.
- Motivation is key.
- Develop applied courses.
- Integrate curriculum.
- Do not wait until 11th grade to start with 9th grade.
    - some schools start in middle school
    - Hemispheric testing may be used as an indicator
- HAV's first year was a planning year for curriculum
    - second year, they picked 24 - 25 9th graders, targeted algebra, physical science and English.
    - third year, integrated Tech Prep ideas in all classes to reach the targeted students. By their junior year, decisions are made.
- Should be a backbone, not a stand alone program.
- More a change of method than content.
- Do not squeeze this on top of what you are doing, but look at doing it different to get the application.
- Spend time with counselors, get them out of the "everyone is college prep" rut.
- Do not be defensive about the program, take an offensive stance.

- If any vocational programs go out of business because of Tech Prep, it is because they are outdated, not because of Tech Prep.

- You cannot make it happen without developing your school's staff. Retreats work well.

- Cooperative learning makes studies more active, place students on teams - use of 4MAT (See attached)

- Education in industry is important, similar to our VIP.

- Technology workshops for all instructors
    - held by vendors (free)
    - held by colleges
    - must have follow-up workshops

QUESTIONS (select ones):

To what extent does business and industry participate in setting curricula?

- advisory role
- information and equipment
- tours and internships

Does industry and business come to you for placement?

No, but they go to post secondary schools where our students go.

Do any of the local businesses/industries give job tests?

Yes, "Bank One" - very simple test.

WORDS of WIT present in the school:

"Every task is a self portrait of the one who does it."

"The future is the time when you will wish you would have done what you are not doing now."

TECH PREP

DEVELOPMENT COMMITTEE

Minutes

February 5, 1991

Members present: Joe Bayless, Ken Feather, Kathie Flood,
Bob Haney, Debra Hunter, Charlie Lane,
Kurt Mowrer, Bill Payne, Rodger Peterson

At 10:40 a.m., the meeting was opened by Debra Hunter. One guest, Sandra Ward, Principal of Oblong High, was present.

Minutes of December 11 meeting were approved.

Everyone enjoyed the earlier tour of Oblong High School's I.T. area.

Debra asked the schools to have their mentors named as soon as possible, by the next meeting at the latest. Mentors should be those who would be able to talk to others with an upswing for Tech Prep. They may be students, teachers, parents, or local business persons. Once selected, a meeting with Debra at each locality will be held.

Debra also requested that, we, as a group, develop a common definition for Tech Prep by next meeting so that all focus on the same goals.

Comments on visit to Hoosier Area Vocational School:

- Across the curriculum so soon into the program is questionable.

- Teaching portions of applied curriculum after teaching portions of abstract curriculum, i.e., Shakespeare would work well.

- Lower group not challenged enough.

- Tracking concepts based on grades or based on desires.

- Some curriculum for all and all curriculum for some.

Debra mentioned that when we initiate the program, we need to take a leap of faith. This will identify problems in students' past. We must modify our initial program to compensate and work on these problems so they do not affect our future students.

Meeting dismissed at 11:30 a.m.

Lunch and a tour of E. H. Baare followed the meeting. Thanks to Mike Uptmore for the tour.

Notes of joint Industrial Advisory-Development Committee meeting will be forwarded under separate cover.

Next meeting is scheduled for February 20, 1991, 9:00 a.m., at Cisne High School. You will need:

- core curriculum, not technical courses
- your thoughts of technical courses

We will start forging our curriculum requirements. Let's be prepared!!!

TECH PREP
DEVELOPMENT COMMITTEE
MINUTES

February 20, 1991

Members present: Joe Bayless, Ken Feather, Kathie Flood,
Bob Haney, Debra Hunter, Charlie Lane,
Kurt Mowrer, Bill Payne, Rodger Peterson

Guests: Lisa Baker, Guidance Counselor, Cisne
Walter Jones, Guidance Counselor, Oblong

Everyone enjoyed the tour of Cisne High School.

The initial presentation was given by Brenda Yates from Curriculum Revitalization. Ms. Yates explained the need for integration of curriculum and showed samples of curriculum packages that can be used as a basis for integration. Each school received a packet of information.

Debra commented on the Board of Governance meeting highlighting the following points:

- pleased with progress
- need curriculum development through college level by June 30, 1991
- need a workshop to introduce Tech Prep to faculty
- suggested implementing applied concepts in separate course areas at the high schools next year so each could learn from the other

Debra also shared the input on skill needs from Leaf, Inc., and Pioneer Label as a result of her recent tour of those plants.

Scott Edgar, State grant overseer, gave the high points of the new legislation affecting Tech Prep. The emphasis was that Tech Prep should be locally based and locally influenced.

Jerry O'hare, Coordinator of State Tech Prep, presented an overview of the program with the following main points:

- Illinois Tech Prep currently has seventeen different plans with common strands, i.e., industry input
- linkage between academic, vocational, secondary and post-secondary systems are vital elements of Tech Prep
- real planning and implementing is done at the local level, not state

- work based learning (i.e., internships, co-op, etc.) should be part of Tech Prep

- Aging work force requires skilled replacements

- Plan for five years is:
  First year - planning and development of implementation plan
  Second year - extended planning and implementation of some ideas (highest federal and state financial contribution)
  Third year - implement entire program
  Fourth year - evaluate and change where needed
  Fifth year - evaluate, financial burden assumed by local schools.

The last portion of the meeting was dedicated to curriculum construction by school. An outline of high school courses that will make up the Tech Prep sequence was developed.

The next meeting is scheduled for March 7, 1991, 9:00 a.m., at Olney Central College.

DEVELOPMENT COMMITTEE

Minutes

March 7, 1991

Members present: Joe Bayless, Ken Feather, Kathie Flood, Charlie Lane, Jim Majernik, Kurt Mowrer and Debra Hunter

Debra called the meeting to order at 9:00 a.m., and the State's Tech Prep video was viewed.

Curriculum sequencing was hampered by the low number of community college representatives. However, following are the accomplishments of each high school since last meeting:

- Mt. Carmel arranged to meet with the faculty to explain integration of Tech Prep with the Science Department at the sophomore level.

- Cisne is exploring the phasing out of general and vocational math to be replaced with a two-year Algebra I class. Also, an Intro Stat/Adv. Computer will be added to the curriculum.

- Oblong will introduce Earth Science and Physical Science in the freshman year. Student may enroll in one of their choosing.

Debra covered the March 5th State Tech Prep meeting. Several handouts were given to each attendee. Others will receive them by mail.

A discussion on articulation with Illinois Eastern Community Colleges by high schools was held. A Tech Prep student may possibly waive entry courses at the community college level, take additional courses or get credit for entry level courses by being enrolled in an articulated high school program.

The AMAX Coal video was previewed by the committee. It was recommended that each school should receive a copy.

The following tentative deadlines were established:

April 1 - Write what we have done and send it to Deb.

April 19 - Meet, be prepared to discuss entrance/exit requirements.

May 1 - Prepare, in writing, a three-year plan plus entrance/exit requirements.

May 8 - Faculty evening in-service, possible stipend.

May 10 - Meet to discuss work-base component.

MINUTES

TECH PREP DEVELOPMENT COMMITTEE

April 19, 1991

Members present: Lonnie Devin, Ken Feather, Bill Geurin, Bob Haney, Charlie Lane, Jim Majernik, Kurt Mowrer, Rodger Peterson, Debra Hunter

Visitors: Glenda Huffman and Debrah Hlavna from University of Illinois with charge to create a handbook to aid other schools in implementing their Tech Prep programs.

Larry D. Helsel, Assistant Dean/Chair, School of Technology, Eastern Illinois University.

Linda M. Grace, Ph.D., Assistant Dean, College of Technical Careers, Southern Illinois University, Carbondale.

Jerry Botkin, Maintenance Director, Hella Electronics, Flora, Illinois.

Debra called the meeting to order at 9:00 a.m. Each of the high schools discussed their curriculum sequencing. Cisne was the only one with a completed implementation plan. Each also reported they had talked to incoming freshmen during orientation.

Debra summarized the results of the Tech Prep skill survey.

Representatives from Eastern and Southern discussed their entrance/exit requirements for programs available. A note of interest was that tech writing courses are being offered for business writing classes.

It was stated that if we could challenge students at any level, the higher the level they can attain.

Both schools spoke favorably of the work we have done.

FY 91 Review:

Good points --
- Trip to HAV, Bloomington, Indiana
- Visiting each others schools
- Communique

Bad points --

- The constant state of change, always averting bad choices. However, the following were suggested:
    - Vary the meeting weekday
    - Always meet for full day
    - Meet only once a month
    - Visit other classes during our free periods.

FY 92 Preview:

- Debra announced the business curriculum will be incorporated next year.

- An additional six high schools will be involved. Three must be business curriculum, the other three can choose between business and manufacturing.

- The present three business departments may participate.

- Marketing of the program will be a major objective next year focusing on students, parents and community.

- An auxiliary committee will be formed consisting of administrative representatives from selected business schools.

Important Dates:

1 May - Implementation sheets with resources and equipment list

10 May - Next meeting, Olney Central College

-

APPENDIX C

Advisory Council Meeting Minutes

ADVISORY COUNCIL MEETING

January 10, 1991

Olney Central College Banquet Room

I. Introduction of Members:

Each member described their company, position and any experience with educational advisory councils.

Those present were:
Brenda Vantlin , Emerson Radio Corp.
Tom Schnell, Amax Coal Company
Dennis Jacobs, Carmi Molded Rubber
Mike Knapp, Sparton Engineered Products
Ronald Berger, Champion Laboratories
Jerry Botkin, Hella Electronics
John Collier, Leaf, Inc.

II. Explanation of Tech Prep:

The following is a synopsis of the information Debra gave at the meeting:

Tech Prep is a new initiative supported by the state and funded through state and federal grant money. The goal of Tech Prep is to develop a curriculum in both high school and community college settings that prepares the students for technical careers. This preparation, both academic and vocational, is geared to provide the necessary skills needed to be a valued and productive employee.

Illinois Eastern Community Colleges' Tech Prep Program is one of five within the state working exclusively in the manufacturing technology area. Tech Prep is currently funded through a planning grant until June 30, 1991. The federal budget has allocated $2.8 million to fund Illinois Tech Prep during FY 92. Illinois is currently working to acquire $2 to $3 million from state revenue funds to augment the federal money. What this means is that IECC has a high potential of being refunded at a higher rate.

We are currently working with three high schools (Mt. Carmel, Oblong and Cisne), one from each of the three regional delivery systems within IECC's district. These high schools were selected by the regional delivery system directors through a variety of methods.

IECC's Tech Prep program is administratively organized as follows:

BOARD OF GOVERNANCE is made up of the three high school principals, three regional delivery system directors and five college deans. Their role is to oversee the administration of the grant. Many members were instrumental in writing the grant proposal.

DIRECTOR, Debra Moll Hunter is charged with coordinating the Tech Prep Program, organizing committee meetings and publicizing the program.

DEVELOPMENT COMMITTEE consists of faculty from the three high schools and three campuses of IECC with equal representatives from academic and vocational areas. This committee will develop curriculum plans for each high school, plus formulate a three-year implementation strategy.

INDUSTRIAL ADVISORY COUNCIL is made up of representatives from local manufacturing firms. A concerted effort was made to get members from a variety of manufacturing types, size and corporate levels. The role of the Advisory Council is to:

* help determine the skills needed by future employees;

* review curriculum to determine if it meets the skill needs;

* assist in training teachers; and

* help develop methods to provide students with hands-on experience (co-ops, equipment, shadowing, etc.).

III. Discussion of Skill Needs:

A discussion followed the Tech Prep explanation in which members discussed the skills their current employees lack, but which are vitally important to the company's productivity. Debra then requested that ALL members start critically reviewing their companies to: (1) determine the labor areas most likely to grow in the next few years; (2) analyze these areas in terms of the technical, academic and social skills that the current employees possess or lack; and, (3) project additional skills that will be imperative to future employees.

This can be done by collecting written work and reading material to determine the grade level. (If you forward these materials to me, I will be able to run them through a computer program to ascertain their grade level.) Math problems can also be analyzed to determine grade level. Additionally, memos and manuals can be examined to determine problems and the level of critical thinking needed to study and solve those problems.

Debra requested this information be sent to her before the next meeting.

IV. Future Meeting:

The next meeting will be February 5, in Robinson, Illinois, with a tentative time set for 1:30 p.m. We will join the Development Committee to discuss the skills that have been identified. Additional information will be forwarded closer to the date.

Tech Prep

"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Peak
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4235

MEMORANDUM

To: Advisory Council

From: Debra Hunter

Date: February 11, 1991

Re: Industrial Advisory Council Meeting

Enclosed are notes and handouts from the Advisory Council Meeting of February 5.

We have had a request from instructors who are teaching or beginning to plan applied courses (courses that integrate real work problems and assignments with academics) for work related procedures and problems that are from this area. I have enclosed a copy of an assignment that came from an applied communication course. From this, you can get some idea of the style of presentation and the content. I will be gathering more information on what is needed by the teachers. But for now, if you can gather ideas for assignments and send them to me, I will copy and send them to the teachers. If I can get four or five assignments from each advisory council company, it would give the teachers a good foundation for a semester's class.

The teachers have also requested old copies of trade journals. If you have any stacked up in your office, please forward to me and I will distribute them. These magazines can be used in a variety of ways by the faculty. Examples:

* as a basis for literature review
* research paper information
* keeping teachers and students abreast of the variety of things happening in the manufacturing arena

- provide photos of new technologies in operation

I know several of these magazines consider educators and educational institutions as qualified recipients of subscriptions. I have enclosed a list of names in case you come across a magazine subscription card.

I have also enclosed copies of the skills that were identified by the companies present at the February 5 meeting. I need similar information from the rest of you as soon as possible. The Development Committee will be meeting on February 20 to begin writing the curriculum. I would like them to have as much information as possible before they begin.

Those present at the February 5th meeting selected March 12, 1:30 p.m., in the Banquet Room at Olney Central College as the next meeting time. We will be laying out the skills you feel are imperative that a Tech Prep graduate possess and formulating ideas on industry involvement.

smk
Enclosures

Tech Prep

"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Peak
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4235

MEMORANDUM

To: Advisory Board

From: Debra Hunter

Date: March 14, 1991

Re: March 12th Meeting

The Industrial Advisory Council met on March 12, 1991, in the Board Room at Olney Central College. Those in attendance were: John Collier, Leaf; Dennis Jacobs, Carmi Molded Rubber; Tom Schnell, Amax Coal; Mike Knapp, Sparton Manufacturing; and Ron Burger, Champion Laboratories; Debra Hunter and one guest, Jim Taylor, Regional Vocational Director for Edwards/Wayne/White/Wabash Counties.

The meeting began with a viewing of the new state-produced Tech Prep video. Following the video, the council discussed the difference between a high school Tech Prep graduate and a Tech Prep associate degree recipient. It was unanimously agreed that a high school Tech Prep graduate would qualify for general labor positions, whereas, an associate degree graduate would be hired for technical/skilled positions. At both levels of entry, successful completion of the Tech Prep program would warrant preference for hiring, apprentice programs and advancement.

The council felt that a Tech Prep completer would need to provide interviewers with a transcript showing successful completion of all Tech Prep course work with a "C" average and a resume of detailed experiences. It was recommended that the Tech Preppers use their counselors as references so employers can acquire additional information for transcript interpretation.

The group was questioned about the benefits of a Tech Prep test given at both the high school and college level in which the scores would be made available to employers for hiring purposes. The council felt that because of the legalities of employment based on test scores and the enormous task of developing a nondiscriminatory test that would provide valid results, it would not be worth any benefit they might receive. It was again pointed out that a resume, transcript and references provided by the applicant is sufficient to determine hiring potential.

To make this a reality, the council recommends that resume writing and interviewing techniques be taught at the high school level. It was also suggested that:

> * Wage vs. cost of living be reviewed (perhaps in a math class) so students understand that the higher wages paid in large cities and other areas does not mean a higher standard of living. They felt this training would help students realize that Southeastern Illinois is on par, wage wise, with other areas.
>
> * Safety be taught at all levels because unsafe behavior is often the basis for dismissal in the manufacturing arena. The council believes that industry representatives can help schools provide this training.

Drug use is an issue that the council feels should be strongly stressed. Most large companies require drug testing at the time of the interview, and they will not hire anyone who does not pass their test. They urge all Tech Prep students to agree to be drug free while in the program, and that the consequences of drug use become part of the Tech Prep curriculum.

The meeting concluded with a discussion of work place learning. Agreement was felt that students should be exposed to real work situations but because of the legalities of having people under the age of 18 around hazardous equipment, a high school school level program will be hard to implement. They highly recommended a college level co-op or internship program but were leary of mandating one because of the possible lack of positions. The council suggested that feasibility studies on shadowing for high school students and video walk-throughs of area industries be conducted.

The next advisory council will be in May or early June to approve the Tech Prep curriculum. You will receive more information on this meeting as the date gets closer.

smk

APPENDIX D

Model Programs Reviewed

COMMUNITY UNIT SCHOOL DISTRICT NO. 300

Technology Program

High School Curriculum Guide

1990-1991

Technology Program

School District #300 offers a four year technology program that enables high school students to:

A. concentrate on the practical skills and knowledge needed for job preparation and future education.

B. emphasize thinking and problem solving skills.

C. reinforce math, science, and communication skills.

The program includes introductory industrial courses at District #300 high schools and advanced technology courses at Elgin Community College.

The technology programs are designed for students with career interests in:
automotive
architectural drafting
computer aided design and drafting
computer aided manufacturing\machine tool
electronics
fire science, and safety
heating, air conditioning, and refrigeration
pre-engineering
thermoplastics
welding.

Each program consists of a Four-Year Plan specifying courses for students from grade 9 through grade 12. The technology course requirements are:

1. Three semesters of orientation courses offered to 9th through 11th grade students at District #300 High Schools.

2. Two semesters of applied technology or physics at grade 11 and one semester of applied communication or advanced level language arts at grade 11 or 12 to be completed at District #300 High Schools.

3. After completing steps #1 and 2,four courses (two fall/two spring) at Elgin Community College may be taken at grade 12 in all areas except Architecture.

Students in the programs complete the required technology courses in high school prior to the senior year. During the senior year, students spend half a day in class in their high school and attend Elgin Community College for two hours per day. The Elgin Community College courses are NOT included in the 18.75 credits required for graduation from District #300. However honors level high school credit will be granted for figuring high school class rank and GPA once the student has met the 18.75 graduation requirement.

Students completing the four ECC courses receive 12 to 16 college credits. The Elgin Community College courses will become part of the students permanent college record and are applicable to occupational degrees and certificates at ECC should the student decide to continue his/her education. Students should see an ECC counselor about courses which transfer to four year institutions.

While at ECC, District #300 students are considered college students with all of the rights and responsibilities delineated in the ECC catalog. To register for the ECC courses, students must 1) complete an ECC application for admission; 2) provide their social security number; and 3) sign a form to release their ECC grades to District #300 and their parents.

PLAN AHEAD!!!

Students interested in any of the technology programs should establish a four year High School plan based on the enclosed sample plans. The plan should be developed and implemented in the 9th grade.

STUDENTS SUCCESSFULLY COMPLETING A PROPERLY DESIGNED PROGRAM WILL --

MEET DISTRICT #300 AND THE ILLINOIS STATE BOARD OF EDUCATION GRADUATION REQUIREMENTS.

MEET THE ILLINOIS BOARD OF HIGHER EDUCATION ENTRANCE REQUIREMENTS FOR STATE SUPPORTED COLLEGES AND UNIVERSITIES.

GAIN ENTRY LEVEL EMPLOYMENT SKILLS IN THE PROGRAM AREA.

EARN ECC COLLEGE CREDITS

Program Cost

The orientation courses at District #300 High Schools have established lab fees. These fees are determined by the program area.

ALL TUITION AND RELATED COSTS FOR THE ADVANCED COURSES TAKEN AT ELGIN COMMUNITY COLLEGE ARE PAID BY DISTRICT #300 FOR HIGH SCHOOL SENIORS.

TRANSPORTATION IS PROVIDED BY DISTRICT #300.

Computer Aided Design/Drafting

Computer Aided Design (CAD) is the world's most advanced product development tool. CAD automates many of the time consuming manual tasks of drafting, designing and engineering. Manufacturers, as a result, bring new products to the marketplace faster. . . products from tennis shoes to the space shuttle.

CAD instruction starts with the fundamentals of drafting and design and continues through advanced computer based techniques. This is an award winning program in vocational education, using the latest available computer equipment and processes.

Required Courses

Grade	9 or 10	713 Introduction to Machine Technology
Grade	9 or 10	704 Introduction to Drafting
Grade	10 or 11	705 Drafting Technology II, Graphics
Grade	10 or 11	706 Drafting Technology III, Pictorials
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Fall - DFT 101, CAD 105*
		Spring - DFT 102, CAD 111

District #300 Recommended Electives: 717 Introduction to Welding, 709 Introduction to Electricity, 720 Introduction to Plastics,641 Keyboarding, 644 Word Processing.

Computer Aided Manufacturing/Machine Tool

Some aspects of the machinist's trade are as old as the Industrial Revolution and others are as new as the microchip. Computer Aided Manufacturing (CAM) is one of industry's newest uses of computers to control production machining. This program offers instruction in basic machining techniques that carry over into tool and die making, mold making, machine building, machine maintenance and general machining. This is another award winning program that provides competitive job training.

Required Courses

Grade	9 or 10	713 Introduction to Machine Technology
Grade	9 or 10	704 Introduction to Drafting
Grade	10 or 11	714 Machine Tool Operations II
Grade	10 or 11	715 Machine Tool Operations III
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Fall - MTO 103, MTO 104*
		Spring - CAM 101, CAM 220

District #300 Recommended Electives: 717 Introduction to Welding, 709 Introduction to Electricity, 720 Introduction to Plastics,641 Keyboarding, 644 Word Processing.

Electronics

No other field has contributed more to high technology than electronics. It is at the very heart of our extraordinary technological advancement of recent years. Sophisticated items like home entertainment systems, lifesaving medical devices and aerospace equipment are a result of the growth in the electronics industry.

Electronics is a field on the cutting edge of technology. To become a part of it means advanced training, an aptitude for math and science and persistence. The electronics program features hands on courses using the latest technology in modern labs. Study options include electronics technology, linear electronics and digital technology.

Required Courses

Grade	9 or 10	709 Introduction to Electricity
Grade	10 or 11	710 Electricity II, DC & AC Analysis
Grade	10 or 11	711 Electricity III, Power Supplies & Amplifiers
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Fall - ELS 100, ELS 105, ELS 234* *Spring - CAD 105, CAD 113*

District #300 Recommended Electives: 717 Introduction to Welding, 641 Keyboarding, 644 Word Processing.

Fire Science & Safety

Urban development and rapid technological advancements have increased the number of complex problems facing the firefighter. Control and prevention of fire has become a science based on principles of building construction and design, knowledge of chemicals and materials, law and enforcement, and the application of the most modern methods of combating a fire.

The program offers two paths for individuals interested in fire science and safety. The first path program provides concentrated study in fire science covering prevention, protection, and the tactics of combating a fire in progress for entry-level employment as a firefighter. An in-depth program provides entry-level employment as a highly specialized and thoroughly trained fire science and safety technician.

Required Courses

Grade	9 or 10	709 Introduction to Electricity
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Fire Science & Safety. This program requires an Individual schedule for students. The program is offered in the evenings and on weekends.*

District #300 Recommended Electives: 641 Keyboarding, 644 Word Processing.

BEST COPY AVAILABLE

Thermoplastics

The plastics industry is a dynamic career field with bright prospects for persons with the right training. In fact the Chicago area and the Fox Valley , in particular, are hubs for the industry with many firms making or processing plastics.

Thermoplastics is a "hands on" injection molding program that offers solid classroom training that will provide a competitive edge to those completing the program. Most instruction centers around state-of-the-art technology and equipment. Course work is recommended for individuals interested in set-up work, mold making, and other related injection molding processes.

		Required Courses
Grade	9 or 10	720 Introduction to Plastics
Grade	9 or 10	704 Introduction to Drafting
Grade	10 or 11	721 Plastics II, Manufacturing
Grade	10 or 11	722 Plastics III, Reinforcing
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Thermoplastics .This program requires an individual schedule for students. The program is offered in the evenings and on weekends.*

District #300 Recommended Electives: 713 Introduction to Machine Technology, 641 Keyboarding, 644 Word Processing.

Welding

The primary process for fabricating and repairing metal components is welding. It is how we've built our skyscrapers, cars, jets, boats. . .anything that is metal. . .and how we will continue doing so in years to come.

Skilled manual welders will remain in demand well into the future. As heavy industry continues to add robot welders for boring, repetitive and dangerous jobs, even more career opportunities will surface. Skilled welding and robotic welding are viable trades for the 21st Century.

Both skilled and robotic welding are a part of this program. In robotics, the focus is programming and applications. In course work the emphasis is on welding and cutting theory and applications, metal composition blueprint reading, troubleshooting, cost estimating - all the elements to become as proficient in welding as possible.

		Required Courses
Grade	9 or 10	717 Introduction to Welding
Grade	9 or 10	704 Introduction to Drafting
Grade	10 or 11	718 Welding II
Grade	10 or 11	719 Welding III
Grade	11	452 Applied Technology
Grade	11 or 12	151 Applied Communication
Grade	*12*	*Fall - WEL 101, WEL 102* *Spring - WEL 208, WEL 214*

District #300 Recommended Electives: 713 Introduction to Machine Technology, 641Keyboarding,644 Word Processing.

COMPUTER AIDED DESIGN/DRAFTING

This Program meets District #300 and the Illinois State Board of Education Graduation Requirements
This Program meets the Board of Higher Education's Entrance Requirements

Period	Year1	Year2	Year 3	Year 4
1	English	English	English	English
2	P.E.	P.E.	P.E.	P.E.
3	Math	Math	Math	**[Applied Communication]
4	Science	Science	Applied Technology	•
5	Lunch	Lunch	Lunch	*Elgin Community College* *Computer Aided Design/Drafting* *Courses 12:30-2:30* *FALL - DFT 101 & CAD 105* *SPRING - DFT 102 & CAD 111* *Return to Home School 3:00pm*
6	World Hist.	Econ./Govt.	U.S. History	
7	[Intro. Mach.Tech.]	[Intro. to Draft.]	[Drafting Tech II] [Drafting Tech III]	
8	F.L/Art/Music	F.L/Art/Music	•	

[Semester Courses]

Prerequisities
For ECC Courses

Recommended Electives - Intro. to Welding; Intro to Electricity; Keyboarding; Word Processing; Intro to Plastics.

**Applied Communication is a program requirement to be completed in the11th or 12th grade. Students enrolled in Advanced or Honors language arts are not required to take Applied Communications.

Physics may be substituted for Applied Technology

COMPUTER AIDED MANUFACTURING/MACHINE TOOL

This Program meets District #300 and the Illinois State Board of Education Graduation Requirements
This Program meets the Board of Higher Education's Entrance Requirements

Period	Year1	Year2	Year 3	Year 4
1	English	English	English	English
2	P.E.	P.E.	P.E.	P.E.
3	Math	Math	Math	**[Applied Communication]
4	Science	Science	Applied Technology	•
5	Lunch	Lunch	Lunch	*Elgin Community College* *Computer Aided Manu/Mach Tool* *Courses 12:30-2:30* *FALL - MTO 103 & 104* *SPRING - CAM 101 & 220* *Return to Home School 3:00pm*
6	World Hist.	Econ./Govt.	U.S. History	
7	[Intro. to Draft.]	[Intro Mach Tech]	[Mach Tool Oper II] [MachTool Oper III]	
8	F.L/Art/Music	F.L/Art/Music	•	

[Semester Courses]

Prerequisities
For ECC Courses

Recommended Electives - Intro. to Welding; Intro to Electricity; Keyboarding; Word Processing;
Intro to Plastics.

**Applied Communication is a program requirement to be completed in the11th or 12th grade.
Students enrolled in Advanced or Honors language arts are not required to take Applied Communications.

Physics may be substituted for Applied Technology

ELECTRONICS

This Program meets District #300 and the Illinois State Board of Education Graduation Requirements
This Program meets the Board of Higher Education's Entrance Requirements

Period	Year1	Year2	Year 3	Year 4
1	English	English	English	English
2	P.E.	P.E.	P.E.	P.E.
3	Math	Math	Math	**[Applied Communication]
4	Science	Science	Applied Technology	•
5	Lunch	Lunch	Lunch	*Elgin Community College* *Electronics Technology* *Courses 12:30-2:30* *FALL - ELS 100, 105 & 234* *SPRING - CAD 105 & 113* *Return to Home School 3:00pm*
6	World Hist.	Econ./Govt.	U.S. History	
7	•	[Intro. to Elect.]	[Electricity II] [Electricity III]	
8	F.L/Art/Music	F.L/Art/Music	•	

[Semester Courses]

Prerequisities
For ECC Courses

Recommended Electives - Intro. to Welding; Keyboarding; Word Processing

**Applied Communication is a program requirement to be completed in the11th or 12th grade.
Students enrolled in Advanced or Honors language arts are not required to take Applied Communications.

Physics may be substituted for Applied Technology

WELDING

This Program meets District #300 and the Illinois State Board of Education Graduation Requirements
This Program meets the Board of Higher Education's Entrance Requirements

Period	Year1	Year2	Year 3	Year 4
1	English	English	English	English
2	P.E.	P.E.	P.E.	P.E.
3	Math	Math	Math	**[Applied Communicatio
4	Science	Science	Applied Technology	•
5	Lunch	Lunch	Lunch	*Elgin Community College* *Welding Technology* *Courses 12:30-2:30* *FALL - WEL 101 & 102* *SPRING - TWEL 208 & 214* *Return to Home School 3:00p*
6	World Hist.	Econ./Govt.	U.S. History	
7	[Intro. to Draft.]	[Intro. to Welding]	[Welding II] [Welding III]	
8	F.L/Art/Music	F.L/Art/Music	•	

[Semester Courses]

Prerequisities
For ECC Courses

Recommended Electives - Intro. to Machine Technology; Keyboarding; Word Processing

**Applied Communication is a program requirement to be completed in the11th or 12th grade.
Students enrolled in Advanced or Honors language arts are not required to take Applied Communications.

Physics may be substituted for Applied Technology

Richmond County Schools - Richmond Community College

Suggested Tech Prep Course of Study

Reg. - Regular
CP - College Prep
•Vocational

GRADE	ENGINEERING (industrial, mechanical, electrical)	HEALTH/HUMAN SERVICES	BUSINESS
9	Reg./CP English Algebra I/IA, General Math Government and Economics Health and Physical Education Physical Science/Arts Education •Industrial Technology Introduction to Agriculture •Rockingham Junior Only	Reg./CP English Algebra I/IA, General Math Government and Economics Health and Physical Education Physical Science/Arts Education •Living Technology	Reg./CP English Algebra I/IA, General Math Government and Economics Health and Physical Education Physical Science/Arts Education •Keyboarding/Typewriting
10	Reg./CP English Algebra I/IA/IB, Geometry/Tech. Math, Practical Geometry Reg./CP Biology •Principles of Technology I •Horticulture I •Introduction to Engineering Technology •ITIE	Reg./CP English Algebra I/IA/IB, Geometry, Practical Geometry Reg./CP Biology Reg./CP Psychology/Sociology •Intro. to Health Occupations •Clothing and Textiles •Parenting and Child Development •Interior Design and Housing •Food and Nutrition •Cosmetology I	Reg./CP English Algebra I/IA/IB, Geometry, Practical Geometry Reg./CP Biology •Computerized Accounting I •Advanced Typewriting/Word Processing •Business Math •Fashion Merchandising •Keyboarding/Typewriting •Marketing •Shorthand/Speedwriting I, II
11	Reg./CP English Geometry, Algebra I/IB, Tech. Math, Practical Geometry United States History - Reg./CP Principles of Technology I/II •Auto Technology I •Carpentry I •Ind. Coop. Training I •Metals Technology I •Graphics I •Drafting I •Textiles I •Electronics I, II •Masonry I •Horticulture II	Reg./CP English Anatomy/Physiology Geometry, Algebra, I/IB, Practical Geometry United States History - Reg./CP Reg./CP Chemistry •Health Occupations I (Gen. and Technical) •Clothing and Textiles •Foods and Nutrition •Parenting and Child Development •Interior Design and Housing •Child Care Services I •Commercial Foods I •Home Economics Cooperative Ed. I •Cosmetology II	Reg./CP English Geometry, Algebra I/IB, Busines Math, Practical Geometry United States History - Reg./CP Science Elective (If Physical Science is not taken) •Administrative Support Occupations I •Shorthand/Speedwriting I, II •Advanced Typewriting/Word Processing •Business Communications •Business Data Processing I •Business Law •Business Math •Computerized Accounting I, II •Marketing •Marketing and Merchandising •Fashion Merchandising •Graphics I

BEST COPY AVAILABLE

12	Reg./CP English Geometry, Algebra II, Tech. Math Principles of Technology I/II *Entrepreneurship *Agriculture Cooperative Ed. *Auto Technology II *Electronics II *Drafting II *Ind. Coop. Training I, II *Metals Technology II *Masonry II *Textiles II *Graphics II *Carpentry II	Reg./CP English Geometry, Algebra II, Practical Geometry Anatomy and Physiology *Entrepreneurship *Health Occupations II *Clothing and Textiles *Foods and Nutrition *Interior Design and Housing *Parenting and Child Development *Child Care Services II *Commercial Foods II *Cosmetology III	Reg./CP English Geometry, Algebra II, Business Math, Practical Geometry *Entrepreneurship *Adminstrative Support Occupations I, II *Advanced Typewriting/Word Processing *Business Communications *Business Data Processing I, II *Business Law *Business Math *Computerized Accounting I, II *Fashion Merchandising *Marketing and Merchandising *Marketing Merchandising and Management *Shorthand/Speedwriting II *Graphics II
13	Architectural Drafting Electrical Installation and Maintenance Electronic Servicing Industrial Maintenance Machinist Vending Machine Maintenance	Practical Nursing Education (LPN) Cosmetology	General Office Technical Specialty
14	Electronic Engineering Technology Mechanical Engineering Technology	Associate Degree Nursing (RN) Criminal Justice Human Services Technology Cosmetology	Accounting Business Administration Business Computer Programming Executive Secretary

Putting it Together

TIMETABLES...

The TECH PREP campaign usually begins in February with workshops, an articulation dinner, and initial publicity. While catalogs are distributed to the students in late January, TECH PREP brochures are distributed to employers for distribution in employees' paychecks. Radio and newspaper advertisements encourage parents to sit down with their children and review TECH PREP material. Registration cards are to be returned in late February.

DECISIONS...

Ideally, eighth grade students registering for their ninth grade classes would choose to enter and continue through the TECH PREP program. Students in other grades may enter the program if they meet the prerequisites for the higher level courses.

Students are aware they are not "locked-in" to TECH PREP or to attending Richmond Community College. Since they are taking higher level courses, they are actually more flexible in

OPTIONS...

Guidance couselors will help students interested in other career fields prepare their schedules. Course schedules leading to careers in everything from Child Care Center Operator to Cabinet Maker have been developed. A listing of community colleges offering related coursework will also be provided.

COURSE OF STUDY SELECTION
FOR SCHOOL YEAR 1987-88

(1) ☐ Pre-College

(3) ☐ General/Vocational

(2) ☐ Tech Prep

☐ Engineering

☐ Health/Human Services

☐ Business

Name: ______________________________ Student I.D. # ____________

Grade (Current): ________ School (Current): ______________________

It is critical that each student choose a course of study that will best prepare him to achieve his academic or career goal.

Each student should choose only one of the three courses of study above. If Tech Prep is selected, check one of the three boxes under Tech Prep.

Choosing a course of study will not lock the student into that program for the remainder of his high school career. It can be changed or altered as necessary to fit the individual's goals.

Please sign, have your parent sign, date and return the form to your homeroom teacher.

____
(Student's Signature)

____
(Parent's Signature)

____
(Date)

____
(Date)

GRADUATE INTENTIONS

YEAR	Four Yr. Col.	Com. Col.	Military	Total
1986	23%	25%	12%	60%
1987	23%	44%	13%	80%
1988	27%	46%	14%	87%
1989	33%	42%	11%	86%
1990	25%	52%	8%	85%

RICHMOND COUNTY SCHOOLS
SAT SCORES

Years	Richmond County	North Carolina	Gap
1985	772	833	-61
1986	778	835	-57
1987	795	838	-43
1988	816	841	-25
1989	819	836	-17
1990	Goal 850		

DROPOUT RATES
(Grades 9 - 12)

School Year	Annual Dropout Rate	Cumulative Dropout Rate
1985-86	7.2%	29%
1986-87	7.0%	28%
1987-88	4.9%	20%
1988-89	4.8%	19%

End of Course Testing
ALGEBRA I

Year	Number Tested	Percent of Class	Percent Core
1986	352	47.1	53.6
1987	387	54.3	60.7
1988	502	75.7	59.8
1989	506	76.4	58.4

End of Course Testing
ALGEBRA II

Year	Number Tested	Percent of Class	Percent Core
1987	162	22.7	64.0
1988	255	38.4	55.5
1989	161	34.5	59.4

HILLSBORO * GLENCOE

HIGH SCHOOL

AND

PORTLAND

COMMUNITY COLLEGE

2 + 2
TECH PREP
GUIDE

Hillsboro Union High School Dist #3
645 N.E. Lincoln, Hillsboro, Oregon 97124
1987

2 + 2 TECH PREP ASSOCIATE DEGREE
MACHINE TECHNOLOGY

A 2 + 2 Tech Prep Associate Degree program ties together grades 11-14 in a continuous succession of courses. The associate degree is typically earned by completing 2 years of designated college courses after graduating from high school. By participating in the 2 + 2 Tech Prep Program, the student is not only certain to have met all of the community college's prerequisites, but may also be able to challenge and earn some of the associate degree credits while still in high school.

Challenge Credits - High school courses which may be taken to challenge and earn associate degree credits are shown below in bold type. The related college courses are also in bold type. High school students should consult with their counselor or teacher to find out how to earn challenge credits.

Required Courses - The 11th &12th grade required courses to earn a high school diploma are the same for every student.

Elective Courses - The elective high school courses for this 2 + 2 Tech Prep program are recommended for providing the student with the best technical preparation for the given associate degree program. Students may choose to exceed or differ from what is recommended.

Changing or Exiting the Program - Flexibility and individual choice is guaranteed and easy to attain with the 2 + 2 Tech Prep Associate's Degree program. Students may enter, exit, or change programs at any time. For many programs there are 3 possible "termination" exit points which will prepare the student with some entry-level job skills and credentials: 1) grade 12 - high school diploma; 2) grade 13 - Vocational Certificate; 3) grade 14 - Associate Degree. See the following page for more information.

2 YEARS..............PLUS..............2 YEARS

HIGH SCHOOL				COMMUNITY COLLEGE					
GRADE 11		GRADE 12		GRADE 13			GRADE 14		
Semester 1				First Term			Fourth Term		
Required Course	Credit	Required Course	Credit	Course #	Title	Cr.	Course #	Title	Cr.
English	.5	English	.5	MCH3.210	Basic Machine Tech. I	15	MCH3.240	Adv. Machine Tech. IV	15
U.S. History	.5	Economics	.5						
Personal Finance	.5								
Elective Course	Credit	Elective Course	Credit						
Algebra II	.5	**Tech. Math**	.5						
Metals II	.5	**Metals III**	.5						
Mech. Drafting II	.5	Mech. Drafting III	.5	Second Term			Fifth Term		
		Princ.Tech./Physics	.5	MCH3.220	Basic Machine Tech. II	15	MCH3.250AA	Adv. Machine Tech. V	15
Semester 2									
Required Course	Credit	Required Course	Credit						
English	.5	English	.5						
U.S. History	.5	Social Studies	.5						
Health	.5			Third Term			Sixth Term		
Elective Course	Credit	Elective Course	Credit	MCH3.230	Basic Machine Tech. III	15	MCH3.260AA	Adv. Machine Tech. VI	15
Algebra II	.5	**Tech. Math**	.5						
Metals II	.5	**Metals III**	.5						
Mech. Drafting II	.5	Mech. Drafting III	.5						
		Princ. Tech./Physic	.5						
TOTAL	6.0	TOTAL	6.0						

APPENDIX E

Manufacturers Survey Results

TECH PREP SKILL SURVEY

Please check the appropriate answer unless otherwise instructed.

TECHNICAL SKILLS

1. Do you presently utilize people trained in: (indicate number of workers skilled in each category)

___ CAD Drafting (Computer Aided Design)

___ CNC Programing (Computer Numerically Controlled)

___ Electrical Maintenance

___ Industrial Electronics

___ General Electronics

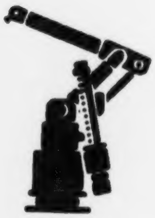
___ Machine Maintenance

___ Tool & Die Designers

___ Tool & Die Fabricators

___ Welders

___ Board Drafters



2. Are employees with these skills trained when you hire them?

___ Yes ___ No, please circle the above categories that require training.

3. If they need training, who provides it?

___ Our plant

___ The local community college
(Please specify where ____________________)

___ Independent training services
(Please specify where ____________________)

___ The corporate offices

___ High school vocational courses

4. Which of the above skill areas do you expect the largest increase in employees in the next 5 to 10 years?

____

____

BASIC SKILLS

5. What percentage of your employees have completed: (estimate as closely as possible)

_____ Grade School

_____ High School

_____ Technical Certificate

_____ Associate Degree

_____ Bachelor's Degree

_____ Master's Degree

6. How much training of any kind, do you invest in your: (Please indicate in number of months)

General Labor __________

Skilled Trades __________

Office Technical __________

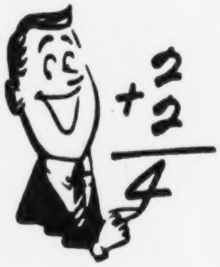
1st Level Managers __________

2nd Level Managers __________

7. In which areas does this training occur: (Please indicate as many as appropriate and rank in order of where your company invests the most effort in training, 1 = highest importance.)

_____ Basic Math Skills

_____ Basic Listening Skills



_____ Speaking Skills

_____ Reading Skills

_____ Basic Technical Skills (Reading blueprints, understanding manufacturing)

_____ Specific Technical Skills (Machine setup, tool specifics)

_____ Company policy and objectives

_____ Other (Please specify) ______________________

8. Of the above areas, which would you prefer to be taught before hiring? (Please circle as many of the above as appropriate.)

OVERALL PREPAREDNESS

9. What skills do you feel are imperative for your current employees to possess? (Please indicate on the left side by marking all that are appropriate to each division.)

GENERAL LABOR	SKILL TRADES	OFFICE TECH.	1st LVL. MGT.	2nd LVL. MGT.		GENERAL LABOR	SKILL TRADES	OFFICE TECH.	1st LVL. MGT.	2nd LVL. MGT.
					Reading simple instructions					
					Reading instruction manuals					
					Reading technical journals					
					Basic adding and subtracting					
					Multiplication, division and fractions					
					Algebraic concept					
					Specific technical math					
					Write simple sentences					
					Write paragraphs, memos					
					Write departmental reports					
					Communicate in English					
					Orally present material to a group					
					Creative thinking					
					Analyze problems					
					Understand their place in the manufacturing process					
					Comprehend the entire manufacturing process					
					Team work					
					Critical thinking					
					Computer knowledge					
					Computer programming					
					Knowledge of the history of manufacturing					
					Understanding of management expectations					
					Understanding of managemer theory and concepts					
					Appropriate work behavior (punctuality, attentiveness)					
					Basic psychology concepts					
					Goal setting					
					Other					

10. Of the above skills, which do you think will be imperative that your future (5 to 10 years) work force possess? (Please indicate on the right side by marking all that are appropriate to each division.)

COMPANY INFORMATION

11. Our company manufactures ______________________________ utilizing ________________________ material (i.e., plastic, metal, food, wood).

12. The company was founded ___________________ (date) and has been located in Southeastern Illinois since ___________________ (date). We averaged _____ (number) employees during calendar year, 1990.

13. Our company presently utilizes: (Please mark as many as applicable.)

_____ CNC (Computer Numerical Control) Machines

_____ CAD (Computer Aided Design/Drafting) Programs

_____ Robots

_____ Material Routing Programs

_____ Manufacturing Resource Planning Programs

_____ Computer Integrated Manufacturing Concepts

_____ Quality Circles

_____ Automated Data Collection (Bar coding, radio frequency, etc.)

_____ Total Quality Control

_____ Programmable and Logic Controllers

HIRING PRACTICES

14. We generally hire people (select the two most appropriate):

_____ Immediately upon graduation from college

_____ Immediately upon graduation from high school

_____ With one to two years work experience

_____ With three to five years work experience

_____ Other _______________________________________

15. In general, we have:

_____ had no problem finding general labor employees.

_____ little problem finding general labor employees, but have had problems locating skilled individuals.

_____ difficulty finding qualified employees.

16. The problem of finding employees in Southeastern Illinois is primarily due to:

_____ not enough people in the area.

_____ the employable population lacks the necessary skills.

_____ the qualified people are hired away from the area.

_____ other. _______________________________________

17. (Optional question) Our employee make-up consists of:

_____ Percent (or number) male

_____ Percent (or number) female

_____ Percent (or number) minority [Black, Hispanic, Asian, American Indian, etc.]

EDUCATIONAL IMPROVEMENTS

18. What do you feel the educational system (elementary through community college) in Southeastern Illinois can do to improve the quality of the future work force?

____

____

____

____

____

19. The educational system in Southeastern Illinois is working to develope a program to improve the quality of the future work force. How would your company be willing to support this effort: (Please select as many as your company would be willing to provide.)

_____ Assist in the educational process by providing talks and counseling to students.

_____ Provide plant tours.

_____ Allow selected students to shadow specific employees and management.

_____ Provide co-op training programs.

_____ Provide "on-the-job-training" for teachers.

_____ Assist financially through donation of funds and/or equipment.

_____ Other ____

RESPONDENT INFORMATION

20. My job title is ______________________________.

21. I have worked for this company:

_____ 1 - 3 years

_____ 4 - 6 years

_____ 7 - 10 years

_____ 11 - 15 years

_____ 16 or more years

22. I presently have children attending the local:

_____ Elementary school

_____ Jr. high school

_____ High school

_____ Community college

_____ I have no children currently enrolled in the local schools.

* * *

Thank you for taking the time to complete this survey. Your information will help mold the Tech Prep program to the needs of Southeastern Illinois.

Please place completed survey in the self-addressed, stamped envelope provided and mail to:

TECH PREP
305 North West Street
Olney, IL 62450

To help us more fully understand the industries in Southeastern Illinois, we could use a copy of company brochures, annual reports, sales brochures, videos, etc. Please enclose them with the survey or mail to the above address.

Results of TECH PREP SKILL SURVEY

Question 1. Of the eighteen surveys returned, the employers indicated that they has personnel skilled in the following areas.

6	CAD Drafting (Computer Aided Design)
3	CNC Programming (Computer Numerically Controlled)
11	Electrical Maintenance
9	Industrial Electronics
3	General Electronics
15	Machine Maintenance
6	Tool & Die Designers
11	Tool & Die Fabricators
16	Welders
6	Board Drafters

Question 2. Ten of the respondants indicated that their employees were skilled in the above areas before they were hired.

Question 3. If additional training was needed it was provided by:

61%	Our plant
22%	The local community college
13%	Independant training services
4%	The corporate offices

Question 4. Areas in which the largest increase in employees is expected in the next 5 to 10 years are as follows: (The percentage refers to the number of responses, not the percentage increase.)

5%	CAD Drafting (Computer Aided Design)
9%	CNC Programming (Computer Numerically Controlled)
9%	Electrical Maintenance
15%	Industrial Electronics
9%	General Electronics
24%	Machine Maintenance
9%	Tool & Die Designers
9%	Tool & Die Fabricators
11%	Welders

Question 5. The average employee has completed the following levels of education:

66%	completed Grade School
79%	completed High School
10%	had a Technical Certificate
30%	had an Associate Degree
5%	had a Bachelor Degree
3%	had a Master Degree

Question 6. The average amount of additional training provided by the employers (in months) to their personnel after they were hired are as follows:

1	General Labor
11	Skilled Trades
5	Office Technical
6	1st Level Manager
5	2nd Level Manager

(low answer to the last two categories, is due to few answering the question)

Question 7. Fifty-five percent indicated that the areas of training that their companys invested the most effort in are as follows:

Basic Listening Skills
Company Policy
Speaking Skills
Reading Skills
Specific Technical Skills
Basic Math Skills
Basic Technical Skills
Other

Question 8. Seventy-two percent indicated that they preferred their employees to have the following skills taught or learned before they were hired. They are listed in order of priority set by the employers.

Basic Math Skills
Basic Technical Skills
Basic Listening & Reading Skills
Speaking & Specific Technical Skills

Overall Preparedness
Skills that are imperative for current & future employees.

Current						Future				
Gen. Labor	Skill Trades	Office Tech.	1st Level Mang.	2nd Level Mang.		Gen. Labor	Skill Trades	Office Tech.	1st Level Mang.	2nd Level Mang
72	72	72	77	77	Reading simple instructions	77	72	61	66	66
55	77	77	77	72	Reading instruction manuals	55	72	72	72	66
.5	33	50	77	66	Reading technical journals	22	72	50	66	61
94	77	77	77	77	Basic adding and subtracting	83	66	66	61	61
83	77	77	77	77	Multiplication, division, and fractions	66	72	72	66	66
0	50	55	66	66	Algebraic concept	22	55	55	55	55
11	44	44	61	61	Specific technical math	22	55	55	50	44
66	61	72	77	72	Write simple sentences	66	55	66	66	61
.5	38	72	77	77	Write paragraphs, memos	27	33	61	66	66
0	11	61	72	77	Write departmental reports	16	22	61	66	61
83	83	88	83	83	Communicate in English	72	77	83	72	66
11	11	50	88	83	Orally present material to a group	27	27	55	72	72
50	61	66	88	83	Creative writing	50	61	61	83	77
55	61	66	80	83	Analyze problems	55	61	66	83	77
83	77	61	0	72	Understand their place in the manufacturing process	0	77	61	77	66
30	50	50	83	83	Comprehend the entire manufacturing process	50	55	55	83	72
88	77	83	88	80	Team work	88	83	83	77	83
33	50	88	77	83	Critical thinking	33	50	66	77	77
11	38	55	72	66	Computer knowledge	27	61	88	77	66
0	22	61	50	38	Computer programming	11	27	0	55	38
22	22	27	50	44	Knowledge of the history manufacturing	27	33	72	50	50
72	77	72	80	66	Understanding of management functions	72	77	44	77	66
22	22	33	88	83	Understanding of management theory and concepts	21	33	77	72	72
94	88	83	83	77	Appropriate work behavior	88	88	83	77	72
.5	11	22	77	72	Basic psychology concepts	22	22	38	61	61
38	38	50	83	77	Goal setting	55	66	66	83	77

Question 11a. Of the business's surveyed:

35%	dealt with the automotive industry
11%	dealt with the garment industry
11%	dealt with wire
11%	dealt with food, food preparation
6%	dealt with printing
6%	dealt with building, construction
6%	dealt with the manufacturing of hand tools
6%	dealt with the manaufacturing of yard ornaments
6%	dealt with the manufacturing of brooms, brushes

Question 11b. Respondants indicated that they utilized the following materials in the course of their manufacturing.

28%	Metals
22%	Plastics
17%	Fabric
11%	Food
11%	Raw Materials
5%	Ceramics, Pottery
5%	Electronics

Question 12a. Starting date for these business's ranged from 1895 to 1990, with 50% opening their doors for business after 1960.

Question 12b. The average number of employees per business is 265. A breakdown of the figures is as follows:

9%	0-100 employees
5%	101-200 employees
13%	201-300 employees
14%	301-500 employees
28%	501-1,000 employees
31%	1,001 and more employees

Question 13. These company's presently utilizes the following skills:

6.5%	CNC (Computer Numerical Control) Machines
9%	CAD (Computer Aided Design/Drafting) Programs
6.5%	Robots
9%	Material Routing Programs
12%	Manufacturing Resource Planning Programs
10%	Computer Integrated ManufacturingConcepts
10%	Quality Circles
13%	Automated Data Collection
12%	Total Quality Control
12%	Programmable and Logic Controllers

Question 14. People were generally hired with the folowing levels of experience or training:

47%	With three to five years work experience
30%	With one to two years work experience
13%	Immediately upon graduation from high school
7%	Other
3%	Immediately upon graduation from college

Question 15. Respondants indicated that they experienced difficulty in obtaining full-time employees because of: (in order of responses)

1. Little problem finding general labor emplyees. but have had difficulty finding qualified employees.
2. Had difficulty finding qualified employees.
3. No problem finding general labor employees.

Question 16. The problem of finding employees in Southeastern Illinois was primarily linked to:

64%	The employable population lacks the necessary skills.
18%	The qualified people are hired ou of this area.
13%	Other.

Question 17. The average % of the workforce by men, women and minorities are:

45	Men
48	Women
2	Minority (Black, Hispanic, Asian, American Indian, etc.)

Question 19. When asked how the companies that were surveyed would be willing to help improve the quality of the future work force, they responded by offering to:

Provide plant tours. (31%)
Assist in the educational process by providing talks and counseling to students. (22%)
Provide co-op training programs. (22%)
Allow selected students to shadow specific employees and management. (14%)
Assist financially through donation of funds and/or equipment. (6.5%)
Provide "on-the-job-training" for teachers. (6.5)

Question 21. Respondants to this survey indicated that they had worked for their company:

1-3 years (33%)
4-6 years (17%)
7-10 years (0%)
11-15 years (28%)
16 or more years (22%)

Question 22. The respondants indicated they have children enrolled in Public school as follows:

Elementary school	(33%)
Jr. High school	(14%)
High school	(10%)
Community College	(.5%)
I have no children at present enrolled in the local schools	(38%)

SKILLS

The following are the Top 10 skills, based on percentages, for each employment level. Those listed above the space are the same for both current and future. Those following after the space are the skill variances.

Top 10 General Labor

Current	Future
Basic adding & subtracting	Basic adding & subtracting
Appropriate work behavior	Appropriate work behavior
Team work	Team work
Multiplication, division & fractions	Multiplication, division & fractions
Communicate in English	Communicate in English
Read simple instructions	Read simple instructions
Understanding of management functions	Understanding of management functions
Write simple sentences	Write simple sentences
Reading instruction manuals	Reading instruction manuals
Analyze problems	Analyze problems
Goal setting	Understand their place in the manufacturing process

Top 10 Skilled Trades

Current	Future
Appropriate work behavior	Appropriate work behavior
Team work	Team work
Communicate in English	Communicate in English
Understand their place in the manufacturing process	Understand their place in the manufacturing process
Read simple instructions	Read simple instructions
Reading instruction manuals	Reading instruction manuals
Multiplication, division & fractions	Multiplication, division & fractions
Basic adding & subtracting	Basic adding & subtracting
Understanding of management functions	Understanding of managment functions
	Reading technical journals
Write simple sentences	Goal setting
Creative thinking	
Analyze problems	

Top 10 Office Technical

Current	Future
Appropriate work behavior	Appropriate work behavior
Communicate in English	Communicate in English
Team work	Team work
Reading instruction manuals	Reading instruction manuals
Multiplication, division & fractions	Multiplication, division & fractions
Basic adding & subtracting	Basic adding & subtracting
Write simple sentences	Write simple sentences
Critical thinking	Critical thinking
Reading simple instructions	Understanding of management theory & concepts
Write paragraphs, memos	Knowledge of the history of manufacturing
Understanding of management functions	Analyze problems
	Goal setting
	Computer knowledge

Top 10 1st Level Management

Current	Future
Creative thinking	Creative thinking
Analyze problems	Analyze problems
Comprehend the entire manufacturing process	Comprehend the entire manufacturing process
Goal setting	Goal setting
Team work	Team work
Appropriate work behavior	Appropriate work behavior
Understanding of management functions	Understanding of management management functions
Communciate in English	Understand their place in the management process
Understanding of management theory & concepts	Critical thinking
Orally present material to a group	Computer knowledge

APPENDIX F

Implementation Plan

THREE-YEAR IMPLEMENTATION PLAN

for

ILLINOIS EASTERN COMMUNITY COLLEGES

TECH PREP PROGRAM

Illinois State Board of Education

Adult, Vocational and Technical
Education

Prepared by

Illinois Eastern Community Colleges
Tech Prep Program

Debra Hunter, Director

1991

Three-Year Implementation Plan for Illinois Eastern Community Colleges Tech Prep Program

Project Staff

Administrative:
Debra Hunter

Developers:
Joe Bayless
Ken Feather
Kathie Flood
Bill Geurin
Bob Haney
Charles Lane
Jim Majernik
Kurt Mowrer
Rodger Peterson

Illinois Eastern
Community Colleges

**Illinois
State Board of
Education**

Robert Leininger
State Superintendent
of Education

Agreement Number:
1-2307-529, SDA #23

Carl D. Perkins
Vocational Education
Act, Tech Prep

**Department of
Adult, Vocational
and Technical
Education**

Vocational Education
Program Improvement
Section

June, 1991

"An Equal Opportunity/Affirmative Action Employer"

This publication was prepared pursuant to a grant with the Illinois State Board of Education and funded 100% through the Carl D. Perkins Vocational Education Act. Grantees are encouraged to freely express their judgements in professional and technical matters. However, points of view or opinions do not necessarily represent official Illinois State Board of Education position or policy.

TECH PREP

THREE-YEAR IMPLEMENTATION PLAN

Introduction:

This Three-year Implementation Plan for the Manufacturing Tech Prep Program is designed to give a detailed picture of the implementation processes for the first year (91-92 school year), and an overview of the direction for the following two-years (92-93 and 93-94).

Included within this document are goals and procedures for the implementation of the manufacturing Tech Prep curriculum. The curriculums for each high school and college program, as they are currently defined, are present with each course description.

In Appendix B are the implementation plans submitted by each high school and reviewed by members of the Tech Prep Advisory Council. Their approval and comments appear in Appendix A.

Goal:

Through instructor involvement and training, the implementation of the Tech Prep manufacturing curriculum will see a modification of academic and vocational courses at the secondary and post secondary levels so skills of completing students will closely match those needed by industry.

Objectives:

To modify math, English and science classes to incorporate application and match the skill needs of industry.

To modify vocational programs at the high school and college level so they match the employment needs of industry.

To upgrade instructors' knowledge of the skills needed in industry and introduce them to a variety of instruction methods that infuse these skills in curriculums.

PROCEDURES

1991-92 School Year

Cisne High - Eliminate Pre-Algebra from curriculum.

- Introduce Introduction to Algebra. This one-year course will involve the same material as the first semester of Algebra I and will incorporate application activities from technical fields.

- Develop a computer aided drafting program.

Oblong - Fully implement piloted Applied Communications into sophomore English II classes.

- Introduce Earth Science and Physical Science.

- Incorporate state communication curriculum into junior level English III speech class.

- Blend Applied Math into Chapter One math curriculum.

Mt. Carmel High- Integrate Applied Communications into sophomore English II classes.

Colleges - Review proposed skill levels of high school Tech Prep graduates to determine college entry level.

- Revise electronics, CAD and machine technology curriculums to accomodate skill level increases and employer skill needs.

Marketing - Target 8th graders and their parents to explain Tech Prep and career options in manufacturing. Tenth graders will also be targeted to introduce them to upper level Tech Prep curriculums and careers in manufacturing.

1992-93 School Year

Cisne High - Modify all English class curriculums to include application.

- Introduce Intermediate Algebra as a one-year course which will replace the vocational math course. This course will cover the second semester of Algebra I and will include applications.

Oblong High - Manufacturing I and II will be split into two separate classes so more information can be covered during each semester.

- Integrate Computer Information Processing through a team-teaching approach.

Mt. Carmel High- Integrate applications into the Algebra I and Earth Science curriculums.

Colleges - Implement curriculum changes recommended in 1991-92.

- Work with academic instructors to integrate applications into their transfer courses.

Marketing - Continue marketing to 8th graders, 10th graders and their parents.

1993-94 School Year

Cisne - Develop a one semester statistics course which will give students a background in probability, graphing data, drawing inferences and analyzing variance. The course will concentrate on application of statistical techniques in business situations.

- Introduce a one-semester course in advance computer programming emphasizing problem solving procedures, debugging and application of high-level skills to real world problems.

High schools and Colleges - Review all modified and new courses to determine effectiveness.

- Develop plan for continuous improvement.

Training:

Faculty and staff will be trained through a variety of programs.

The Tech Prep program will continue to train instructors through Development Committee activities such as tours and presentations and through district-wide presentations. Additionally, each high school will be involved in training sessions that are designed to meet their particular needs.

Cisne:

*Two after school workshops for faculty and staff explaining what Tech Prep means to Cisne High and how each instructor can participate.

*Tour Bloomington, Indiana, to see their Tech Prep program in action.

*Workshop for all faculty on Tech Prep and how they can be involved.

Oblong:

*Training for teachers involved with Applied Math and Applied English.

*Workshop for all faculty on Tech Prep and how they can be involved.

Mt. Carmel:

*Training for teachers involved with Applied English.

*Workshop for all faculty on Tech Prep and how they can be involved.

Colleges:

*Workshop on what Tech Prep means to them.

*Integration workshops of vocational and academic subjects at each campus.

Equipment Needs:

		Description	Estimated Cost
Cisne:			
	10	386 SX Zenith Computers 1 Laser Printer Peripheral Material	$ 28,995.00
		Computer Lab Equipment (tables, chairs, etc.)	6,800.00

Oblong:			
		Earth Science Lab	$ 2,000.00
	2	Machine Shop Stations	3,000.00
		Accessories	950.00
	4	CAD Stations	12,000.00
Mt. Carmel:			
	14	Computers	$ 35,000.00
	5-6	Printers	10,000.00

Entrance/Exit Requirements:

All eighth graders who are interested in the manufacturing Tech Prep program and possess the aptitude to complete the freshman level courses will be registered for the manufacturing Tech Prep curriculum.

Those completing the manufacturing Tech Prep curriculum with a "C" average in all classes will be considered a Tech Prep graduate by manufacturers in the area. Research will be undertaken to develop a manufacturing Tech Prep test to be given at both the secondary and post secondary level that will lead to a Tech Prep certification.

TECH PREP CURRICULUM
Mt. Carmel High School

Freshman

1st Semester	2nd Semester
1. English I-A	1. English I-B
2. Pre-Algebra or Algebra	2. Pre-Algebra or Algebra
3. Earth Science	3. Earth Science
4. P. E.	4. P. E.
5. Lunch	5. Lunch
6. I.D. Tech Comm.	6. I.D. Tech Trans.
7. Elective	7. Elective

Sophomore

1st Semester	2nd Semester
1. English II-A	1. English II-B
2. Algebra or Geometry	2. Algebra or Geometry
3. Health	3. Health
4. P. E./Dr.Ed.	4. Lunch
5. Lunch	5. Elective
6. I.D. Tech. Energy	6. I.D. Tech Manufac.
7. Elective	7. Elective

Junior

Juniors have two electives - Industrial options available are:

1. Wood Manufacturing
2. Metals Manufacturing
3. Graphic Communications
4. CAD Drafting

1st Semester	2nd Semester
1. English III-A	1. English III-B
2. U. S. History	2. U. S. History
3. P. E.	3. P. E.
4. Lunch	4. Lunch
5. Math, Algebra II or Geometry	5. Math, Algebra II or Geometry
6. Science - Physics	6. Science - Physics
7. ________________	7. ________________

Senior

Seniors have four electives - Industrial options are:

1. Wood Manufacturing
2. Metals Manufacturing
3. Graphic Communications
4. CAD Drafting

1st Semester	2nd Semester
1. Economics	1. American Government
2. P.E.	2. P.E.
3. Lunch	3. Lunch
4. English IV-A	4. English IV-B
5. Science-Chemistry	5. Science-Chemistry
6. ________________	6. ________________
7. ________________	7. ________________

MT. CARMEL MANUFACTURING TECH PREP COURSE DESCRIPTIONS

FRESHMAN

ENGLISH I-A:

This course includes a study of the language concepts with emphasis on the writing of effective sentences. The course also includes vocabulary study.

ENGLISH I-B:

This course includes an overall study of five genres. The course also includes vocabulary study and literature based composition.

PRE-ALBEGRA

Pre-Algebra is a course that is designed to aid students in the transition from general mathematics to algebra. The course is designed to help the student in this transition by reviewing the topics of general mathematics and at the same time, introduce in a familiar context, the abstract ideas of algebra and geometry. Emphasis is placed on the logical development of mathematical ideas, re-enforcement of old skills, development of new skills and problem solving.

ALGEBRA I (May also be taken as a Sophomore)

In Algebra I, the fundamental operation with signed numbers and polynomials, factors and factoring, exponents, linear equations and their graphs are studied and these concepts are extended to the real number system. Included in the course are topics in fractions, radicals, systems of equations, quadratic equations, mathematical structure and proof. Emphasis is placed on development of skills in applied problem solving.

EARTH SCIENCE

Earth Science is the science course taken by most freshmen. It is the third course in a sequence: biology in seventh grade, physical science in eighth grade and earth science in ninth grade (freshman year). Earth Science is the study of the earth and its environment. We start our study with the broadest possible view and proceed to more specific topics. Generally, these are divided into three areas: (a) the earth in its celestial setting, (b) the physical structure of the earth and the forces that shape it, (c) the intricate relationship of its nonliving parts and those living things that inhabit it. The formal fields employed in each of these concepts are astronomy, geology, oceangraphy, weather and ecology.

COMMUNICATION TECHNOLOGY

Communication Technology is a course designed to foster an awareness and understanding of the technologies used to communicate in our modern society. Students will gain experience in the areas of design and drafting, radio and television broadcasting, computers in communication, photography, graphic arts, and telecommunications.

TRANSPORTATION TECHNOLOGY

Transportation Technology is a course designed to foster awareness and understanding of the various transportation customs that make up our mobile society. Through laboratory activities, the student will be exposed to the technologies of and career opportunities involved in material handling, atmospheric and space transportation, marine transportation, terrestrial transportation, and computer uses in transportation technology.

SOPHOMORE

ENGLISH II-A

Language and composition with vocabulary lessons. (Prerequisite: English I-A and I-B)

ENGLISH II-B

World literature with literature-based composition vocabulary lessons as a supplement. (Prerequisite: English I-A and I-B)

GEOMETRY (May also be taken as a Junior)

Geometry deals with the measurement, properties and relationships of points, lines, angles, polygons, circles, surfaces and solids. It includes the essentials of plane euclidean geometry, which is made to develop ability in logical thinking, systematic proof and an appreciation of mathematical structure. (Prerequisite: Elementary Algebra)

HEALTH EDUCATION

The purpose of this course is to provide students with factual information concerning the mental, physical, and social aspects of health--the scientific basis for intelligent self-help preventive medicine. Such information will enable young people to make informed decisions regarding the health problems they face from day to day. It will provide them with facts regarding such important matters as what food to eat, how to become physically fit, when to see a doctor, and the effects of smoking, drinking and using drugs. The students will also learn the proper technique of cardiopulmonary resuscitation and basic life support systems.

DRIVERS EDUCATION

Drivers Education is designed to help students develop the social, mental, and physical skills necessary to operate a motor vehicle. It will provide a foundation of knowledge and skills for safe and efficient driving for years ahead.

Each student will be scheduled for 30 hours of classroom instruction and 6 hours of behind-the-wheel training.

ENERGY UTILIZATION TECHNOLOGY

Energy Utilization Technology is a course designed to foster an awareness and understanding of how we use energy in our industrial technological society. Areas of study will include conversion of energy; electrical fundamentals; solar energy resources; alternate energy resources such as wind, water, and geothermal; fossil fuels; nuclear power; energy conservation; and computer uses in energy technology. Students will use laboratory experiences to become familiar with current energy technologies.

MANUFACTURING TECHNOLOGY

Production Technology is a course designed to foster an awareness and understanding of manufacturing and construction technology. Through a variety of learning activities, students are exposed to many career opportunities in the production field. Experiences in manufacturing include product design, materials and processes, tools and equipment, including computers, safety procedures, corporate structure, management, research and development, production planning, mass production, marketing and servicing. In construction, students will be exposed to site preparation, foundations, building structures, installing utilities, and finishing and servicing structures.

JUNIOR

ENGLISH III-A

Chronological approach to American literature with vocabulary lessons and literature-based composition. (Prerequisite: English II-A and II-B)

ENGLISH III-B

Continuance of chronological approach to American literature with vocabulary lessons and literature-based composition beginning where III-A stopped. (Prerequisite: English II-A and II-B)

ALGEBRA II

Algebra II is the logical extension of Elementary Algebra and includes development of the real number and complex number systems, solutions of quadratic equations and inequations and an introduction to the elementary functions over the reals: Polynomial, rational, algebraic, exponential and logarithmic. Also included are topics in coordinate geometry, systems of equations, sequences and series and combinatory mathematics. (Prerequisite: Geometry)

AMERICAN HISTORY

American History starts at the beginning fo the American Colonical Period. Each period from the time of exploration to present day America is discussed. History of the American People by Norman K. Rejord, is the text for the course. Films, records and cassettes are used to augment the text in the course. (Prerequisite: Junior year)

PHYSICS

Physics is a down-to-earth course basically involving the study of energy. (To a small degree, matter will be studied in the course.) The forms of energy studied are mechanical energy, heat, sound, electrical energy, and light. The course is mostly a non-mathematical approach to physics with emphasis on using the learned concepts of physics for solving interesting and practical exercises. A considerable portion of this course is laboratory experimentation--a learning-by-doing experience. If you want a basic understanding of the physical world and an exciting challenge to your thinking process, then physics is the course for you. (Prerequisite: One year of Earth Science, Biology or Elementary Algebra)

INDUSTRIAL TECHNOLOGY ELECTIVES

METALS MANUFACTURING I-A

This course covers basic machining on the lathe, mill and grinders.

METALS MANUFACTURING I-B

A course designed to aid the student in becoming familiar with the basic fundamentals of machine tools and machine tool technology. Students will have the opportunity to learn basic skills that pertain to the drill press, engine lathe, sharper, horizontal milling machine and the vertical milling machine. Competencies for this class include, but are not limited to: machine three required projects to a .005fi or tolerances on diameters and thickness and 1/32 on lengths with a 125 or better finish; set up the horizontal and vertical mills safely and skillfully; set up and use the drill press, engine lathe, surface and pedestal grinder safely and skillfully.

METALS MANUFACTURING II-A AND II-B

A program for seniors who have chosen metal trades as a vocation. Machine tool operations and related skills, such as sheet metal, pipe fitting, and plumbing will be taught as related to the machine tool trades. Competencies for this course include, but are not limited to: construct projects in specifications of drawing or prints; accomplish all of the competencies for Orientation to Metals and Machine Tools.

GRAPHIC COMMUNICATIONS I-A

Offered as a semester course, the student will have the opportunity to gain some knowledge and basic skills that will enable him to become useful to himself and to others. Students will have the opportunity to discover their vocational abilities as well as their limitations so that future vocational selections will be wise and purposeful. Use the computer typesetter and processor; operate the darkroom camera and electrostatic platemaker, set-up and operate the folding machine skillfully; prepare mechanical layouts of jobs; develop negatives of line copy skillfully; run the offset presses; use the PMT material and processor properly and gain limited use of an Apple IIE computer using the "Print Shop" software and other related programs.

GRAPHIC COMMUNICATIONS I-B

A general, yet, comprehensive course concentrated on the basic concepts and practices in job printing. Organized learning experiences involving layout, composition, makeup of computer typesetting and offset press operations. Competencies for this course include, but are not limited to: use of the computer typesetter and processor correctly; operate the darkroom camera and electrostatic platemaker skillfully; set-up and operate the folding machine skillfully; prepare mechanical layouts of printing jobs (paste-ups); develop

BEST COPY AVAILABLE

negatives of line copy skillfully; run the offset presses safely and skillfully; use the PMT material and processor correctly; use the Apple IIE and related printing software correctly.

GRAPHIC COMMUNICATIONS II-A and II-B

Concentrated advance training in productin printing with emphasis on developing marketable skills. Organized learning experiences related to offset press work and other processes related to production printing shops and newspapers. Competencies for this course are limited to: use the darkroom camera to its fullest extent; use the electrostatic platemaker skillfully; use the computer typesetter to its fullest extent; shoot PMT halftones; mask a negative and make a plat; run the processors correctly and accomplish all of the competencies of Graphic Communications I-A and I-B. (Prerequisite: Based on performance on Graphic Communications I-A and I-B with permission of the instructor.) Juniors and Seniors only.

WOOD MANUFACTURING I-A

Offered as a semester course, the student will have an opportunity to gain some knowledge and basic skills that will enable him to become useful to himself and to others. Students will have the opportunity to discover their vocational abilities as well as their limitations so that future vocational selections will be wise and purposeful. Competencies for this course include, but are not limited to: identify and know basic tree sawing techniques used by lumber dealers; be able to figure board feet, square feet, and have some knowledge of how to purchase lumber materials; identify and know the use of all hand woodworking tools available to them in our shop; know the main working parts of, and be able to use safely the scroll saw, bandsaw, drill press, radial arm saw, hand drills, table saws, jointer, surface planer, router, sanders, electronic hand drills, have a limited knowledge of various wood construction joints and how and when to use them in the construction of a project.

WOOD MANUFACTURING I-B

Offered as a semester course, the student will have the opportunity to gain some knowledge and basic skills that will enable him to become useful to himself and to others. Students will have the opportunity to discover their vocational abilities as well as their limitations so that future vocational selections will be wise and purposeful. The student, having completed an orientation class of woodworking, will now be given the opportunity to expand his knowledge and skills of woodworking. After a brief review of machines and their safe use, the student will be required to turn in a plan of procedure as to how he will construct said project.

WOOD MANUFACTURING II-A AND II-B

Offered as a full year course, the student will have the opportunity to gain some knowledge and basic skills that will enable him to be useful to himself and to others. Having completed both the Orientation and Woodworking II course, the student will now be given the opportunity to expand his knowledge and skills of the field of woodworking. A more advanced study of furniture construction techniques and related problems now await the advanced student. He will be required to work more independently and work out solutions to problems encountered on his own.

DRAFTING/CAD I-A

A semester course designed to acquaint the student with the specialized areas of the drafting industry. Students will learn the basic skills needed to become proficient in these specialized areas. Drafting is important to the machinist, carpenter, electrician, etc. Students will learn why all skilled draftsmen need a background in drafting to become successful in these areas.

DRAFTING/CAD I-B

Technical related information is a vital part of the total part of the program. Experience is obtained in all phases of Machine Drafting, Jig and Fixture Design, Product Development and Assembly Drawing.

A program in Architectural Drafting which will acquaint the student with building materials, construction principles and other vital information necessary for construction planning and design plat, structural, for details, for elevation and perspective plans for buildings will be constructed.

DRAFTING/CAD II-A AND II-B

A general course covering the technical aspects pertaining to the field of Architectural Drafting. Students will have the opportunity to learn the basic skills by performing the following: laying out the building site, drawing floor plans, and drawing front, side and rear elevations. Drawing wall sections and details and techniques of blue printing. Orthographic Projection Techniques are learned including multiview drawing, pictorals, auxiliary views, section views, developments, revolutions and rotations.

SENIOR

ENGLISH IV-A

This course includes a review of grammer, in-depth study of the parts of a research paper, writing of a research paper, expository writing and vocabulary study. (Prerequisite: English III-A and cumulative high school English grade, 3.5)

ENGLISH IV-B

This course fully studies British Literature from Old English to Modern English Literature in a chronological approach, emphasizing the importance of literature on a whole. (Prerequisite: English III-B)

GOVERNMENT

The American system of government has a basic structure that has remained constant over a long period of time, yet within the system has changed, grown, adapted and had new ideas included in its format. It is important for students to understand this ability to change without destroying itself.

The course is taught in a manner intended to convey to the student a basic understanding of the foundation of the American government system. It is also expected that the student shall gain an understanding of the responsibilities of American citizenship. The function of the course shall also be to instill an understanding of how the American Government system works. (Prerequisite: Senior level)

CONSUMER ECONOMICS

A semester course in Consumer Education that is required of all students who do not pass a state published test that waives this requirement. Students at this level willsoon be independent of their parents and faced with making their own decisions. The students should be aware of the decisions and responsibilities that they will be facing during their life. (Prerequisite: Senior year)

CHEMISTRY

Chemistry is an exciting and challenging course involving the study of matter. The course includes a study of the properties of matter and the changes that occur in the composition of matter as different kinds of matter interact. What man knows about chemistry he has learned through experimentation--a hands-on approach to learning. Some of the topics studied are the elements; the periodic table; atoms; molecules; chemical; chemical formulas and equations; gases; liquids; solids; chemical bonding; solutions; acids and bases; salts; and vegetable and animal molecules. Also, included in the course will be interesting applications of these topics. If you like science and want to challenge your thinking process, then chemistry is your kind of course.
(Prerequisite: One year of Earth Science or Biology and one year of Elementary Algebra)

TECH PREP COURSE PLAN
CISNE HIGH SCHOOL (25-50 QUARTILE)
Work Bound

Freshman

1st Semester	2nd Semester
- English I	- English I
- Keyboarding or Elective	- Computer Concepts or Elective
- Introduction to Algebra	- Introduction to Algebra
- General Science	- General Science
- Communication Technology	- Communication Technology
- Physical Education	- Physical Education

Sophomore

1st Semester	2nd Semester
- English II	- English II
- Health	- Driver's Education
- Intermediate Algebra	- Intermediate Algebra
- Physical Science or Elective	- Physical Science or Elective
- Production Technology	- Production Technology
- Physical Education	- Physical Education

Junior

1st Semester	2nd Semester
- English III	- English III
- U.S. History	- U.S. History
- Geometry	- Geometry
- Elective (if Physical Science already taken)	- Elective (if Physical Science already taken)
- Tech Prep Elective	- Tech Prep Elective
- Physical Education	- Physical Education

Senior

1st Semester	2nd Semester
- Statistics	- Advanced Computer Programming
- Government	- Resource Management
- Welding Technology	- Welding Technology
- Two Electives	- Two Electives
- Physical Education	- Physical Education

TECH PREP COURSE PLAN
CISNE HIGH SCHOOL (50-75 QUARTILE)
College Bound

Freshman

1st Semester	2nd Semester
- English I	- English I
- World History or World Geography	- World History or World Geography
- Algebra I	- Algebra I
- Physical Science	- Physical Science
- Communication Technology	- Communication Technology
- Physical Education	- Physical Education

Sophomore

1st Semester	2nd Semester
- English II	- English II
- Health	- Driver's Education
- Geometry	- Geometry
- Biology	- Biology
- Production Technology	- Production Technology
- Physical Education	- Physical Education

Junior

1st Semester	2nd Semester
- English III	- English III
- U.S. History	- U.S. History
- Algebra II	- Algebra II
- Chemistry	- Chemistry
- Welding Technology	- Welding Technology
- Physical Education	- Physical Education

Senior

1st Semester	2nd Semester
- English IV	- English IV
- Government	- Resource Management
- Statistics	- Advanced Computer Programming
- Trigonometry	- Elective
- Elective	- Elective
- Physical Education	- Physical Education

CISNE HIGH SCHOOL
MANUFACTURING TECH PREP
COURSE DESCRIPTIONS

FRESHMAN

ENGLISH I, Grammar, 1/2 Unit, 9th grade

Grammar includes a review of the eight parts of speech with emphasis on sentence elements and mechanics, paragraph writing, vocabulary building, and also a speech unit.

ENGLISH I, Literature, 1/2 Unit, 9th grade

Literature emphasizes an appreciation and understanding of the elements of the short story, poetry, novel, and drama in American and European literature through reading, classroom discussion, study and related writing.

ALGEBRA I, 1 Unit, 9th, 10th grades

Algebra I is a presentation of basic algebra concepts. The emphasis is upon the number systems, the structure of algebra, the logical justification of operations and procedures, and the precise use of language.

PHYSICS, 1 Unit, 11th, 12th grades

Physics is a one year laboratory course designed to present a clear and straight forward presentation of the basic concepts of physics. Mechanics is the study of motion, and is studied by experiments and the use of graphs. Then the interrelationships between each form of energy heat, light, sound, electric, nuclear, magnetic are studied. (Prerequisite: Biology I and Algebra I)

GENERAL SCIENCE, 1 Unit, 9th grade

This freshman level course is designed to give the incoming student an overall look at the field of science. Subject areas are chosen from the catious areas of sciences. Included are the topics of earth science, chemistry, life sciences and physics.

COMMUNICATION TECHNOLOGY, 1/2 Unit, 9th or 10th grade entry level

Communication Technology is a course designed to foster an awareness and understanding of the technologies used to communicate in our modern society. Students will gain experience in the areas of design and drafting, radio and television broadcasting, computers in communication, photography, graphic arts and telecommunications.

ENERGY UTILIZATION TECHNOLOGY, 1/2 Unit, 9th or 10th grade entry level

Energy Utilization Technology is a course designed to foster an awareness and understanding of how we use energy in our industrial technological society. Areas of study will include conversion of energy; electrical fundamentals; solar energy resources; alternate energy resources such as wind, water and

and computer uses in energy technology. Students will use laboratory experiences to become familiar with current energy technologies.

SOPHOMORE

ENGLISH II, SKILL BUILDING, 1/2 Unit, 10th grade
This course includes a review of grammar and also sentence elements and mechanics. Emphasis will be on vocabulary building, writing in conjunction with outside reading and basic speech.

ENGLISH II, LITERATURE, 1/2 Unit, 10th grade
Literature continues the study of both American and European literature-short stories, essays, biography, poetry, drama and novels.

HEALTH, 1/2 Unit, 10th grade
This course is one semester and will teach health from three different viewpoints, the physical, mental-emotional, and social health to help the student understand themselves and those around them.

DRIVER EDUCATION, 1/2 Unit, 10th grade
The Driver Education course will consist of thirty classroom hours and six hours of behind the wheel training. The emphasis of the classroom teaching will be to give the student a positive driving attitude, a knowledge of the rules of the road, and an understanding of the problems and procedures associated with handling of automobiles in today's traffic patterns. The driving phase of the course will teach the student the proper physical skills they will need to know to handle an automobile. It will also allow the student a chance to practice those things they have learned in the classroom.

GEOMETRY, 1 Unit, 10th, 11th and 12th grade
Geometry is a course designed to use the properties of geometry and algebra to develop inductive and deductive reasoning abilities. Practical uses of Geometry will also be studied.

BIOLOGY, 1 Unit, 9th, 10th and 11th grade
Biology is the study of life and a wide range of topics are introduced in this course. Students will discuss taxonomy ecology, physiology, and anatomy, and also take a more in-depth look at the workings of the cell. The course includes laboratory work on both plants and animals.

TRANSPORTATION TECHNOLOGY, 1/2 Unit, 9th and 10th grades
Transportation Technology is a course designed to foster an awareness and understanding of the various transportation customs that make up our mobile society. Through laboratory activities, the student will be exposed to the technologies of and career opportunities involved in material handling,

atmospheric and space transportation, marine transportation, terrestrial transportation, and computer uses in transportation technology.

PRODUCTION TECHNOLOGY, 1/2 Unit, 9th and 10th grades
Production Technology is a course to foster an awareness and understanding of manufacturing and construction technology. Through a variety of learning activities, students are exposed to many career opportunities in the production field. Experiences in manufacturing include product design, materials and processes, tools and equipment, including computers, safety procedures, corporate structure, management, research and development, production planning, mass production, marketing and servicing. In construction, students will be exposed to site preparation, foundations, building structures, installing utilities, and finishing and servicing structures.

JUNIOR

ENGLISH III, LITERATURE, 1/2 Unit, 11th grade
Literature emphasizes American literature - essays, biographies, auto-biographies, short stories, and drama - through reading, classroom discussion, and related writing.

ENGLISH III, COMPOSITION, 1/2 Unit, 11th grade
Emphasis is on writing descriptive and expository paragraphs and longer compositions, reports and vocabulary building.

CHEMISTRY, 1 Unit, 10th, 11th, 12th grades
This course offered to students who have finished Biology I, is a study of the structure and composition of all matter, living and non-living. The course includes observations, text studies and experimentation dealing with matter. The metric system is used extensively. A laboratory manual is purchased by each student. (Prerequisite: Algebra I and Biology I)

WELDING, 1 Unit, 11th and 12th grades
This course provides learning experiences designed to allow students to gain knowledge and skills in metal welding, brazing, and flame cutting. Planned learning activities in this course should be balanced to allow students to become knowledgeable of fundamental welding principles and methods and to develop basic practical skills in welding, brazing, and cutting a variety of metals. Instruction should emphasize safety principles and practices, properties of metals, blueprint reading, electrical principles, welding symbols, destructive and nondestructive testing, and layout techniques. Student activities should relate to experiences in oxyacetylene and arc welding, fabrication, and repair requiring the student to weld all types of joints in all positions. Selection of these activities should be planned to provide experiences appropriate to individual student's

abilities and interests and should relate to the job-entry-level skill requirements of local employers.

SENIOR

ENGLISH IV, 1 Unit, 12th grade

This college preparatory course is designed for those students who plan to continue their education beyond high school. Composition of original themes and those suggested by reading in world literature is stressed. Studies also include outside readings and vocabulary building. A research paper is required.

OBLONG HIGH SCHOOL MANUFACTURING TECH PREP COURSE PLAN

Freshman

1st Semester	2nd Semester
- English I	- English I
- Health	- Consumer Ed.
- Algebra I	- Algebra I
- Biology I	- Biology I
- Intro. to Industrial Tech.	- Intro. to Industrial Tech.
- Physical Education	- Physical Education

Sophomore

1st Semester	2nd Semester
- English II	- English II
- Keyboarding	- Computer Concepts
- Geometry	- Geometry
- Earth Science or Physical Science	- Earth Science or Physical Science
- Intro. to Industrial Tech.	- Intro. to Industrial Tech.
- Physical Education	- Driver's Education

Junior

1st Semester	2nd Semester
- English III	- English III
- U. S. History	- Government
- Computer I	- Computer I
- Science Elective	- Science Elective
- Manufacturing I	- Manufacturing I
- Physical Education	- Physical Education

Senior

1st Semester	2nd Semester
- Tech Prep English	- Tech Prep English
- Economics	- Economics
- World History	- World History
- Manufacturing II	- Manufacturing II
- Elective	- Elective
- Physical Education	- Physical Education

OBLONG HIGH SCHOOL
COURSE DESCRIPTIONS
MANUFACTURING TECH PREP

FRESHMAN

ENGLISH I

Fifteen to eighteen weeks are spent studying grammar and writing. Nine weeks are spent in oral communications. The students must present one demonstration speech and one personal experience speech during this unit. The remainder of the time will be spent studying literature: "Romeo and Juliet", "Silas Marner", and various American and English poets and writers will be discussed.

HEALTH (1/2 Credit)

A basic foundation must be layed in all health education classes. This would include units in anatomy and physiology. All systems of the human body are covered. Emphasis is stressed on today's number one problem--alcohol and drug abuse. Other units include appearance, behavior, nutrition, chronic diseases, first aid and safety, CPR, physical fitness, health careers and current health problems such as aids, anorexia neruosa and alzheimers disease. Guest speakers are used from the community to lend their expertise.

CONSUMER MANAGEMENT (1/2 Credit)

The Consumer Management class is offered to any student who wishes to take it with no prerequisite. Material covered is goals and values, how to make financial choices, occupational training, budgeting, credit and lending procedures, buying and sales contracts, buying or renting a house, advertisement, federal and government agencies that help protect the consumer labeling and packaging, government grades, purchasing and operating a car, buying appliances, clothing and food, and as many projects as time will permit like wills, insurance, social security, etc.

ALGEBRA I

A course designed to increase the ability and enthusiasm to work in the more advanced mathematics and related fields.

BIOLOGY I

A laboratory science course designed for students who wish to continue in the field of biological science. Such topics as cells, basic life processes, twig and leaf identification, basic anatomy and physiology of plants, and the dissecting of earthworms, clams, starfish, frogs and pig embryos will be discussed.

INDUSTRIAL TECHNOLOGY ORIENTATION

This course is designed to provide basic skills and knowledge in various occupations and career areas. It is exploratory in nature - developing appreciation in the areas of communication, production, and mass production processes using wood, electronics and metals. The student will develop knowledge of today's industrial occupations and find an interest for worthwhile vocational occupational experiences.

SOPHOMORE

ENGLISH II

Fifteen to eighteen weeks are spent studying grammar and writing. Nine weeks are spent studying oral communication. The students must present one informative speech and one persuasive speech during this unit. The remainder of the time is spent studying literature: "Julius Caesar", "To Kill a Mockingbird", and various American and English poets and writers are discussed.

KEYBOARDING I (1 Credit) For grades 9, 10, 11 and 12

In the first semester of typewriting, emphasis is placed on the mastery of the keyboard and correct technique in order to build accuracy and speed.

Second semester places primary emphasis on the development of skills required in the efficient completion of personal and business papers, letters, tables, themes, reports, outlines, and other forms of business papers.

All students in high school are encouraged to enroll in typewriting, either to fulfill personal use or occupational goals.

The beginning typewriting student will be able to operate a typewriter for vocational and personal use.

COMPUTER CONCEPTS

A semester course introducing the student to a hands-on experience with the computer. Terminology, programming, and applications are all introduced. Open to sophomores, juniors or seniors who have not had any computer training.

GEOMETRY

The student will learn to identify lines, line segments, postulates and theormes, inductive and deductive reasoning and other items related to the field of geometry.

PHYSICS

A laboratory science course using experiments on force, motion, heat, sound, light, and electricity and using the metric system of measurement in these experiments. Also included in this course is a description of matter, atoms and the different forms of energy.

DRIVER EDUCATION (1/2 Credit)

The purpose of this course is to introduce students to the highway transportation system and to strategies which will help develop driving knowledge and skills related to today's and tomorrow's motorized society, and to provide in-depth study of the scope and nature of accidents and their solution. The content should include, but not be limited to instruction within the classroom and laboratory environment, in vehicle control and traffic procedure, defensive strategies for driving, natural laws and their application to driving, energy efficient and safe and enjoyable vehicle ownership, physical and mental factors, legal and moral obligations, knowledge of rules and regulations of the State of Illinois, planning for safe travel to include map studies and a comprehensive study of the effects of drugs and alcohol.

JUNIOR

ENGLISH III

The great themes of the world are studied with an eye toward studying form and content in both poetry and prose. Communication and composition skills are stressed.

U. S. HISTORY

U. S. History is a course designed to help the student understand why and how the past came to be. It helps the student see historical perspectives of our country's role in the world in terms of its inter-dependence and/or self-sufficiency in relation to other nations. It gives the student the opportunity to develop the skills used in interpreting maps and graphs and to realize that we owe a debt to other peoples for their contributions to our civilization.

GOVERNMENT

This course is a survey of the system of government in the United States. The United States constitution is taught and the responsibilities of being a United States citizen.

COMPUTER MATHEMATICS

The use of computers to do algorithms and solve problems using the BASIC language are presented in this class. Algebra I, geometry, and keyboarding are recommended. This class may be used to satisfy the third year of mathematics.

MANUFACTURING PROCESSES

Introduction to skills in the use of woodworking machinery is of basic importance. Emphasis in continued woodworking skills is stressed. This is accomplished by the class construction of a chosen project by mass production means.

SENIOR

ECONOMICS

This course is designed to help the student understand the American economic system in order to participate in it as businessmen, workers, consumers, and investors. It helps the student understand how man attempts to satisfy his seemingly unlimited wants with limited resources: human, natural, financial or otherwise. It also helps the student develop the ability to define and analyze economic issues, not only as the particular problems affect them personally, but also as the problems affect the entire economy.

WORLD GEOGRAPHY

World Geography is organized and taught to allow the student to develop the skills used in interpreting maps and graphs. It is designed to examine man's relation to his environment and the implications thereof. The student has the opportunity to examine the varying degrees of impact that democratic and industrial revolutions have had on different culture regions throughout the world and to examine the natural and cultural resources of nations to better understand where and how man lives in different ways in different regions of the world.

WORLD HISTORY

Oblong High School's course in World History is organized and taught in such a manner to allow the student to separate fact from fiction. It gives the student an opportunity to understand today's world problems by comparing them with relevant past situations. The student will discuss vital current issues of importance and examine other countries in order to determine what made them great or weak.

WABASH VALLEY COLLEGE
ELECTRONICS TECHNOLOGY DEGREE

The Electronics Technology Program at Wabash Valley College provides basic education for beginners in the electronics field, as well as providing advanced education and training for skilled technicians in today's high-tech electronics society.

Students in the program gain a working knowledge and ability in several areas of electronics. These include basic electricity, AC and DC circuits, solid-state components, drafting and PC board design, control electronics, automation, industrial and communications systems, microwave, satellite, radar, computer operation, electronic mail, circuit repair, equipment maintenance, and robotics. Students also have the opportunity of gaining experience in computer applications and programming.

Students completing this program may obtain employment in a wide range of electronics applications throughout the world. The need for trained electronics technicians is growing rapidly.

FIRST SEMESTER	SEMESTER HOURS CREDIT
ELT 1212 Eletronic Drafting/PC	4
ELT 1213 Electricity	4
ELT 1214 Solid State Electronics	4
MTH 1201 Technical Mathematics	4
	16
SECOND SEMESTER	
CIS 1200 Introduction to Microcomputers	3
ELT 1221 Electronics I	4
ELT 1222 Pulse and Digital Circuits	5
ELT 1223 Electronic Systems Servicing	4
	16
THIRD SEMESTER	
ELT 2231 Electronics II	5
ELT 2232 Occupational Investigation	2
ELT 2233 Basic Computer Technology	3
ELT 2234 Industrial Electronics	4
PSY 1103 Business Psychology	3
	17
FOURTH SEMESTER	
ELT 2241 Microwave Communications	4
ELT 2242 Introduction to Robotics	4
ELT 2243 Special Problems in Electronics	4
ENG 1201 Communications	3
Math or Computer Language or Physical Science Elective	4
	19
Total Hours	68

COURSE DESCRIPTIONS
FIRST YEAR

ELT 1212 ELECTRONIC DRAFTING/PC (4-3-2)
This is a drafting course for electronics technology. It includes electric and electronic layouts, schematic and block diagrams, control devices, graphic symbols, wiring connections, and installation drawings required in circuit design. The course also includes PC board layout, design and

development. PREREQUISITE: Electronics Technology student or instructor approval. Three classroom hours per week. Two lab hours per week. 4 semester hours credit.

ELT 1213 ELECTRICITY I (4-2-4)
This course deals with the principles of electricity and electronics. It includes Ohm's and Kirchoff's laws; series, parallel, and combination circuits; resistance, magnetism, and electro-magnetic induction; inductance and capacitance in DC circuits; generation and measurement of AC; and transformers, reactance, impedance, resonance, and filters in AC circuits. PREREQUISITE: Concurrent enrollment in electronics math or equivalent or instructor approval. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

ELT 1214 SOLID STATE ELECTRONICS (4-2-4)
This course provides a study of semiconductor theory and solid state devices, including diodes, transistors, rectifiers and integrated circuits. It also covers applications of solid state devices in electronic circuits; including power supplies, amplifiers, TRIACS, SCR, operational amplifiers, and oscillators. PREREQUISITE: Concurrent enrollment in ELT 1213 or equivalent or instructor approval. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

MTH 1201 TECHNICAL MATHEMATICS (4-4-0)
This course is designed for students enrolled in technical programs. Topics include: measurement and approximation, algebraic principles and operations, identification and use of formulas. In addition, geometric and trigonometric principles also may be covered if applicable to the program area. Emphasis is placed on the application of mathematical concepts to the solution of problems in vocational and technical fields. Four classroom hours per week. 4 semester hours credit.

CIS 1200 INTRODUCTION TO MICROCOMPUTERS (3-3-0)
This is an introductory course in the use of microcomputers. The course includes basic software development and includes hardware and software applications. Students will learn how to write and debug a program and be introduced to data base, file management, and word processing. The course is designed primarily for students in technical programs who will be operating computers on the job. Three classroom hours per week. 3 semester hours credit.

ELT 1221 ELECTRONICS I (4-2-4)
This course is the first of a two-course sequence in electronics as applied to the communications field. It covers oscillator circuits, classes of amplifiers, use of power supplies, regulators, and associated circuits. PREREQUISITE: Completed courses in electricity, electronic math, solid state, or instructor approval. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

ELT 1222 PULSE & DIGITAL CIRCUITS (5-3-4)

Principles of operation, performance, and design of digital circuits and/or digital instrumentation are covered in this course. The course also includes: number systems, including binary; Boolean algebra and application to digital logic; digital logic circuits; digital logic application to electronic instrumentation; and operation and design of digital systems with real-time applications. PREREQUISITE: ELT 1213 and ELT 1214 or consent of instructor. Three classroom hours per week. Four lab hours per week. 5 semester hours credit.

ELT 1223 ELECTRONIC SYSTEMS SERVICING (4-4-0)

This course provides an analysis of troubleshooting procedures for electronic devices and systems. Component testing, repair methods, and test equipment utilization are covered. Service of electronic systems, such as radios, TV's, transmitters, VCR's stereos and other home entertainment devices also are included. PREREQUISITE: ELT 1213 and ELT 1214 or consent of instructor. Four hours lecture per week. 4 semester hours credit.

SECOND YEAR

ELT 2231 ELECTRONICS II (5-3-4)

This course is the second of a two-course sequence in electronics as applicable to the communications field. The course covers principles of AM and FM circuits, modulation, TRF receivers, super heboclyne units, transmitters and transmission principles. PREREQUISITE: ELT 1221 Electronics I, Electronics Math or instructor aproval. Three classroom hours per week. Four lab hours per week. 5 semester hours credit.

ELT 2232 OCCUPATIONAL INVESTIGATION (2-2-0)

This class provides student orientation to the work places and work environments of the electronics technology field. It includes an overview of the business, industry and service areas of electronics. Students develop an awareness of job opportunities and job requirements as well as a knowledge of working conditions. PREREQUISITE: A student in Electronics Technology or a related field and has completed the first year of studies or have instructor's permission. Two classroom hours per week. 2 semester hours credit.

ELT 2233 BASIC COMPUTER TECHNOLOGY (3-2-2)

This course covers the design of general purpose, digital, and analog computer systems; devices and technology employed in their fabrication; code design; and models of program structure for study of machine organization. PREREQUISITE: Sophomore standing in the Electronics program or consent of instructor. Two classroom hours per week. Two lab hours per week. 3 semester hours credit.

ELT 2234 INDUSTRIAL ELECTRONICS (4-2-4)

This is a study of electronics applied to industrial control mechanisms and advanced circuitry. It includes control and switching devices, transducers, relays, PLC's, industrial telemetry, and data transmission techniques. Students receive hands-on experience with selected electronic components and devices in industry, including motors (AC and DC), operational amplifier applications, and microprocessors. PREREQUISITE: Sophomore standing in the Electronics program or consent of the instructor. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

PSY 1103 BUSINESS PSYCHOLOGY (3-3-0)

Problems of discipline, motivation, communication, authority, introduction of change, teamwork, etc., are examined by case study. Three classroom hours per week. 3 semester hours credit.

ELT 2241 MICROWAVE COMMUNICATIONS (4-2-4)

This course in microwave communications introduces the student to microwave theory, instruments, equipment and techniques employed in microwave circuitry and measurement. It also includes transmission and reception techniques. PREREQUISITE: Second year Electronics student or instructor approval. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

ELT 2242 INTRO TO ROBOTICS (4-2-4)

The theory and technology of industrial robots used in manufacturing and production are the major topics of this course. The course includes the anatomy of robots, their reliability, maintenance, safety, support systems, and applications to industry. PREREQUISITE: Sophomore standing in the Electronics program or consent of the instructor. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

ELT 2243 SPECIAL PROBLEMS IN ELECTRONICS (4-3-2)

This course is a research problem/independent study of a specialized electronic nature, which is not available in the college's course offerings. The study must be of sufficient depth to merit four hours credit and should be an area that interests the student. It must be conducted with the approval and supervision of the instructor. PREREQUISITE: Final semester of Electronics program or consent of instructor. Three classroom hours per week. Two lab hours per week. 4 semester hours credit.

ENG 1201 COMMUNICATIONS (3-3-0)

This course is designed to develop the students appreciation of the value of communication between individuals and between business and industries. It is to provide a practical application for today's trades, business, and industrial workers, particularly in the comprehension and expression of written English as it applies to business letters, reports and memoranda. Three classroom hours per week. 3 semester hours credit.

LINCOLN TRAIL COLLEGE
MACHINE SHOP TECHNOLOGY - AAS

The Lincoln Trail College Machine Shop Technology program prepares the student with on-the-job knowledge of machine trades, which is obtained under controlled conditions with technical instruction and practical experiences. Laboratory work is geared to products achieved under actual working conditions, involving the type of equipment found in the typical industrial tool and die shop, as well as specialized equipment associated state-of-the-art techniques found in research and development projects.

The Machine Shop Technology program allows the graduate to enter the occupation at a high level of proficiency and progress at a rapid rate in industry. Typical entry-level job titles for graduates of the Machine Shop Technology program are: tool and die maker apprentice, jig and fixture repairman, quality control inspector, tool room foreman, machine operations specialist, electrical discharge machinist, computer numerical control machinist, grinding specialist, first class machinist and overall general machine operator.

FIRST YEAR

First Semester		Semester Credit
EDR 1202	Mechanical Blueprint Reading	4
MAC 1210	Basic Machine Shop Practice	4
MAC 1211	Basic Machine Shop Lab	4
MAC 1203	Precision Measurement	3
MTH 1201	Technical Mathematics	4*
	Total	19
Second Semester		
MAC 1212	Lathe Operation I	4
MAC 1213	Lathe Operation Lab I	4
WEL 1203	Practical Welding	4
ENG 1201	Communications	3*
BOC 1206	Employment Methods	1
	Total	16

SECOND YEAR

First Semester		
MAC 2210	Milling Machine I	4
MAC 2211	Milling Machine Lab I	4

PHY 1111	Technical Physics I	4*
EDU 1108	Standard Red Cross First Aid	2*
CAD 1210	Computer Aided Drafting I	3
	Total	17
	Second Semester	
MAC 2212	Machine Tool & Die	4
MAC 2213	Machine Tool & Die Lab	4
MAC 2203	Manufacturing Processes	2
ENG 1211	Basic Skills in Oral Communications	2*
PSY 1103	Business Psychology	3*
	Total	15
	Total Hours	67

* General Education Hours (18)

COURSE DESCRIPTIONS

FIRST YEAR

EDR 1202 MECHANICAL BLUEPRINT READING (4-2-4)
This course covers graphic communication standards used in engineering design drawings. Forging, casting, fabrication, detail, assembly, and die drawings are studied. Machinists and other production personnel study the arrangement of information on an engineering design drawing. Standard symbols, abbreviation, and material list organization are covered in depth. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

MAC 1210 BASIC MACHINE SHOP PRACTICE (4-4-0)
The course covers the nomenclature, care and use of the most basic machine tools of the industry, with major emphasis on the primary operations performed in layout, power saw, drill press and engine lathes. The use of precision measuring instruments, such as layout tools, micrometer and gauges will be taught. Safety in the metal working shop is stressed. This course must be taken concurrently with MAC 1211, Basic Machine Shop Lab. Four classroom hours per week. 4 semester hours credit.

MAC 1211 BASIC MACHINE SHOP LAB (4-0-8)
This is an orientation course which includes basic operation in bench work, hand operations, layout power saws, drill press and engine lathe work. The use of precision measuring instruments, will also be used. Safety in the metal working shop is stressed. This course must be taken concurrently with MAC 1210, Basic Machine Shop Practice. Eight lab hours per week. 4 semester hours credit.

MAC 1203 PRECISION MEASUREMENT (3-2-2)

This course is designed to provide students with appropriate knowledge and skills in precision measurement, inspection methods and quality control. Included will be the techniques of precision measurement, the theory of measurement calibration, and the application of industrial inspection equipment work measurement. Also included will be production output topics such as production sampling and data base development, along with basic motion and time studies. Two classroom hours per week. Two lab hours per week. 3 semester hours credit.

MTH 1201 TECHNICAL MATHEMATICS V1-4 V(4-4-0)

This course is designed for students enrolled in technical programs. Topics include: measurement and approximation, algebraic principles and operations, identification and use of formulas. In addition, geometric and trigonometric principles also may be covered if applicable to the program area. Emphasis is placed on the application of mathematical concepts to the solution of problems in vocational and technical fields. Variable credit, 1-4 semester hours of credit.

MAC 1212 LATHE OPERATIONS (4-4-0)

This course is a continuation of MAC 1210, but with greater depth and scope. Tolerances and finishes are closer and operations are more complex. Additional units of study include learning to operate a lathe, turret lathe, shaper, milling machine, and the various attachments for the machines. This course must be taken concurrently with MAC 1213, Lathe Operations Lab. PREREQUISITE: MAC 1210. Four classroom hours per week. 4 semester hours credit.

MAC 1213 LATHE OPERATIONS LAB (4-0-8)

This course is a continuation of MAC 1211, but with greater depth and scope. Tolerances and finishes are closer and operations are more complex. Additional units of study include learning to operate a lathe, turret late, shaper, milling machine. The various attachments will also be used on all machinery. This course must be taken concurrently with MAC 1212, Lathe Operations. PREREQUISITE: MAC 1211. Eight lab hours per week. 4 semester hours credit.

WEL 1203 PRACTICAL WELDING (4-2-4)

This is a practical course in the use of oxy-acetylene, electric arc, and metal inert gas (MIG) welding equipment. Students will practice cutting, bronze welding, fusion welding, and hardfacing with the oxy-acetylene flame. Selection of electrodes, running beads, and welding common joints in all positions will be presented. Familiarization with semi-automatic inert gas processes will also be provided. Two classroom hours per week. Four lab hours per week. 4 semester hours credit.

ENG 1201 COMMUNICATIONS (3-3-0)
This course is designed to develop the student's appreciation of the value of communication between individuals and between business and industries. It is to provide a practical application for today's trades, business, and industrial workers, particularly in the comprehension and expression of written English as it applies to business letters, reports and memoranda. Three classroom hours per week. 3 semester hours credit.

BOC 1206 EMPLOYMENT METHODS (1-1-0)
This course is designed to prepare students with skills to find and obtain the job they want. Emphasis will be placed on writing resumes, letters of application, and preparing for the interview. The course is especially helpful for those who will be seeking on-the-job training or permanent employment. One classroom hour per week. 1 semester hour credit.

SECOND YEAR

MAC 2210 MILLING MACHINE (4-4-0)
This course is a continuation of MAC 1212, which involves many aspects of the milling machine. Advanced training will be given in horizontal and vertical milling machines. Important elements of the course will include milling operations, set-up procedures, work holding devices, and milling machine operations. This course will also provide the students experience with universal tool grinders and surface grinders. This course must be taken concurrently with MAC 2211, Milling Machine Lab. PREREQUISITE: MAC 1212. Four classroom hours per week. 4 semester hours credit.

MAC 2211 MILLING MACHINE LAB (4-0-8)
This is a continuation of MAC 1213, being concerned with the operation of the milling machine. Advanced training will be given in horizontal and vertical mill, jig borer and grinding machines. PREREQUISITE: MAC 1213. Eight lab hours per week. 4 semester hours credit.

PHY 1111 TECHNICAL PHYSICS I (4-3-2)
This is a course in mechanics on fluids for the vocational-technical student. It covers Newton's laws, conditions for equilibrium, torque, momentum, motion in one and two dimensions, work, energy, power and fluids. Three classroom hours per week. Two lab hours per week. 4 semester hours credit.

EDU 1108 STANDARD RED CROSS FIRST AID (2-2-0)
This course, which is designed for the general public, consists of regulations, American Red Cross first aid methods and safety procedures. It includes self-help and home care first aid procedures. Two classroom hours per week. 2 semester hours credit.

CAD 1210 COMPUTER AIDED DRAFTING I (3-1-4)

The principles of Computer Aided Drafting (CAD) are discussed, and the student operates a microcomputer-based CAD system. One classroom hour per week. Four lab hours per week. 3 semester hours credit.

MAC 2212 MACHINE TOOL AND DIE (4-4-0)

This is an advanced class which facilitates the student to utilize the skills and knowledge learned in previous machine shop courses. Work is brought in from industry and the student has an opportunity to run real jobs. Rapid completion and accuracy are very important. The construction of small jigs, fixtures and permanent dies and molds will also be taught. Successful completion of the course requires the student to be proficient with the standard machine tools, attachments, and appropriate procedures. This course must be taken concurrently with MAC 2213, Machine Tool and Die Lab. PREREQUISITE: MAC 2210. Four classroom hours per week. 4 semester hours credit.

MAC 2213 MACHINE TOOL AND DIE LAB (4-0-8)

This is an advanced class which facilitates the student to utilize the skills and knowledge learned in previous machine shop courses. Work is brought in from industry and the student has an opportunity to run real jobs. Rapid completion and accuracy are very important. The construction of small jigs, fixtures and permanent dies and molds will also be taught. Successful completion of the course requires the student to be proficient with the standard machine tools, attachments, and appropriate procedures. This course must be taken concurrently with MAC 2212, Machine Tool and Die. PREREQUISITE: MAC 2211. Eight lab hours per week. 4 semester hours credit.

MAC 2203 MANUFACTURING PROCESSES (2-2-0)

This course introduces the student to basic manufacturing processes. An understanding of the relationship between the product and the method of production is studied. The major areas of study are materials, casting and forming processes, machining processes, welding processes, and techniques related to manufacturing processes. Two classroom hours per week. 2 semester hours credit.

ENG 1211 BASIC SKILLS IN ORAL COMMUNICATIONS (2-2-0)

A course designed to improve the student's understanding of and verbal skills in interpersonal, listening, small group, interviewing, and public speaking activities. Emphasis is placed on understanding the problems and learning the techniques that lead to effective communications in these areas. Two classroom hours per week. 2 semester hours credit.

PSY 1103 BUSINESS PSYCHOLOGY (3-3-0)

Problems of discipline, motivation, communication, authority, introductin of change, teamwork, etc., are examined by case study. Three classroom hours per week. 3 semester hours credit.

LINCOLN TRAIL COLLEGE
INDUSTRIAL ENGINEERING DRAFTING - AAS

Graduates of the Industrial Engineering Drafting program should be able to perform and demonstrate: dimension principles, true position, tolerancing, layout and assembly drawing, selection of materials, detailing, piping layout, spool sheets, sheet metal developments, structural detailing, jig and fixture design and die design drawings.

Typical entry-level job titles for Industrial Engineering Drafting degree program graduates are: industrial draftsman engineering aide, design draftsman, and production assistant. The graduate may enter career tracts for specialized industry training in product design and manufacturing process design.

FIRST YEAR

	First Semester	Semester Credit
EDR 1210	Mechanical Drafting I	4
CAD 1210	Computer Aided Drafting I	3
ART 1111	Drawing I	3*
MTH 1201	Technical Mathematics	3*
ENG 1201	Communications	3*
	Total	16

	Second Semester	
EDR 1220	Mechanical Drafting II	4
CAD 1220	Computer Aided Drafting II	3
MTH 1101	Intermediate Algebra	4*
ENG 1211	Basic Skills in Oral Communications	2*
MAC 2203	Manufacturing Processes	2
CIS 1101	Intro to Computers & Their Applications	2*
	Total	17

	Summer Semester (Optional)	
EDR 1205	Engineering Drafting Internship	4

SECOND YEAR

	First Semester	
EDR 2210	Design of Machine Elements	4
CAD 2210	Computer Aided Drafting III	3

PHY 1111	Technical Physics I		4*
XXX XXXX	Elective		3
XXX XXXX	Elective		2
		Total	16
	Second Semester		
EDR 2220	Die Design Principles		4
CAD 2220	CAD - Special Problems		3
MAC 1204	Machine Shop Processes		6
PSY 1103	Business Psychology		3*
		Total	16
		Total Hours	65

*General Education Hours (24)

COURSE DESCRIPTIONS

FIRST YEAR

EDR 1210 MECHANICAL DRAFTING I (4-1-6)
This course familiarizes the student with fundamental skills of mechanical drafting. The drafting skills studied are sketching, use of instruments, lettering, orthographic projection, use of line vocabulary, sectioning, dimensioning, geometric construction, and tolerancing. PREREQUISITE: One year of drafting in high school or EDR 1201 with a grade of C or better. One classroom hour per week. Six lab hours per week. 4 semester hours credit.

CAD 1210 COMPUTER AIDED DRAFTING I (3-1-4)
The principles of Computer Aided Drafting (CAD) are discussed, and the student operates a microcomputer-based CAD system. One classroom hour per week. Four lab hours per week. 3 semester hours credit.

ART 1113 INTRODUCTION TO DRAWING (3-2-2)
The course is a foundation for all areas of art. Instruction will be in basic drawing techniques, media use and concepts. The course is designed to provide a survey of the extent and nature of drawing and to broaden the student's appreciation and skills in drawing. Two classroom hours per week. Two lab hours per week. 3 semester hours credit.

MTH 1201 TECHNICAL MATHEMATICS V1-4 V(4-4-0)
This course is designed for students enrolled in technical programs. Topics include: measurement and approximation, algebraic principles and operations, identification and use of formulas. In addition, geometric and trigonometric principles also may be covered if applicable to the program area.

Emphasis is placed on the application of mathematical concepts to the solution of problems in vocational and technical fields. Variable credit, 1-4 semester hours of credit.

ENG 1201 COMMUNICATIONS (3-3-0)

This course is designed to develop the student's appreciation of the value of communication between individuals and between business and industries. It is to provide a practical application for today's trades, business, and industrial workers, particularly in the comprehension and expression of written English as it applies to business letters, reports, and memoranda. Three classroom hours per week. 3 semester hours credit.

EDR 1220 MECHANICAL DRAFTING II (4-1-6)

This course is designed to familiarize the student with advanced drafting concepts, fasteners, gears, axomonetric projection, cams, welding symbols, surface development, and sheet metal intersections. PREREQUISITE: EDR 1210 with a grade of C or better or consent of the instructor. One classroom hour per week. Six lab hours per week. 4 semester hours credit.

CAD 1220 COMPUTER AIDED DRAFTING II (3-1-4)

The student uses CAD software to create 2-D and 3-D drawings. Special emphasis is placed on modifying existing drawings. PREREQUISITE: CAD 1210. One classroom hour per week. Four lab hours per week. 3 semester hours credit.

MTH 1101 INTERMEDIATE ALGEBRA (4-4-0)

Topics covered in this course include: properties and operations of the number system; operations with polynomials, including factoring; operations with algebraic fractions; exponents, roots, and radicals; first and second degree equations and inequalities; exponential and logarithmic functions. This course may not be used to fulfill the math portion of the AA and AS general education requirements. It does count as elective credit toward either of these degrees. Applicability toward other degree or certificate programs should be discussed with your counselor. PREREQUISITE: A grade of "C" or better in the first year of high school algebra or REM 0421 and/or a sufficient score on the placement test. Four classroom hours per week. 4 semester hours credit.

ENG 1121 BASIC SKILLS IN ORAL COMMUNICATIONS (2-2-0)

A course designed to improve the student's understanding of and verbal skills in interpersonal, listening, small group, interviewing, and public speaking activities. Emphasis is placed on understanding the problems and learning the techniques that lead to effective communications in these areas. Two classroom hours per week. 2 semester hours credit.

MAC 2203 MANUFACTURING PROCESSES (2-2-0)
This course introduces the student to basic manufacturing processes. An understanding of the relationship between the product and the method of production is studied. The major areas of study are materials, casting and forming processes, machining processes, welding processes, and techniques related to manufacturing processes. Two classroom hours per week. 2 semester hours credit.

CIS 1101 INTRODUCTION TO COMPUTERS AND THEIR APPLICATIONS (2-2-0)
This course is an introduction to computers and their applications. Topics include computers and their capabilities, computer equipment, and software. The educational, social and vocational aspects and impact of computers will be discussed. Applications of computers will be emphasized by utilizing various software packages in laboratory exercises. These exercises will be completed in open lab. Two classroom hours per week. 2 semester hours credit.

SECOND YEAR

EDR 1205 MECHANICAL DRAFTING INTERNSHIP (4-1-15)
This course will provide the student the experience of being placed in an engineering drafting or an engineering drafting related field situation for full-time training experience for a 15-week period. An individual training agreement will be developed for each student enrolled and signed by employer, student, and college coordinator. The student will be supervised by the employer and college coordinator. PREREQUISITE: EDR 1220 with a grade of "C" or better. One classroom hour per week. Two hundred twenty five internship hours per semester. 4 semester hours credit.

EDR 2210 DESIGN OF MACHINING ELEMENTS (4-1-6)
This course familiarizes the student with principles and practices used in designing and drawing machining jigs and fixtures, drilling jigs, and milling jigs. The human factors in design, material selection, production plans, stock part usage, design economics, and efficient tool design are discussed. Students practice using brushings, set blocks, clamps and locators. PREREQUISITE: EDR 1220 with a grade of "C" or better or the consent of the instructor. One classroom hour per week. Six lab hours per week. 4 semester hours credit.

CAD 2210 COMPUTER AIDED DRAFTING III (3-1-4)
The student creates drawings using an advanced microcomputer-based drafting system. These drawings are advanced and present special problems for the CAD operator. PREREQUISITE: CAD 1220. One classroom hour per week. Four lab hours per week. 3 semester hours credit.

PHY 1111 **TECHNICAL PHYSICS I (4-3-2)**
This is a course in mechanics on fluids for the vocational-technical student. It covers Newton's laws, conditions for equilibrium, torque, momentum, motion in one and two dimensions, work, energy, power and fluids. Three classroom hours per week. Two lab hours per week. 4 semester hours credit.

EDR 2220 **DIE DESIGN PRINCIPLES (4-1-6)**
This course familiarizes the student with principles and practices used in designing metal working dies. Blanking, piercing, forming, drawing, compound and progressive dies are studied. Calculations are made of blanking forces, stripping forces, drawing forces, blank size, punch and die radii, and percentage reduction. Standard part catalogs are used to assemble a die set. Die drawings are created. PREREQUISITE: EDR 2210 with a grade of "C" or better or consent of instructor. One classroom hour per week. Six lab hours per week. 4 semester hours credit.

CAD 2220 **CAD-SPECIAL PROBLEMS (3-1-4)**
The student will draw projects which pose special problems in the use of CAD systems. These problems will be developed in conference with the instructor. PREREQUISITE: CAD 2210. One classroom hour per week. Four lab hours per week. 3 semester hours credit.

MAC 1204 **MACHINE SHOP PROCESSES (6-3-6)**
This course is designed to give students basic understanding and operation of a basic machine shop. In addition, the course covers the nomenclature, care and use of most basic machine shop tools. Some of the machines covered will be the drill press, lathe, milling machine, shaper, and saws and grinders. The use of precision measuring instruments such as layout tools, micrometers, and gauges will be taught. Three classroom hours per week. Six lab hours per week. 6 semester hours credit.

PSY 1103 **BUSINESS PSYCHOLOGY (3-3-0)**
Problems of discipline, motivation, communication, authority, introduction of change, teamwork, etc., are examined by case study. Three classroom hours per week. 3 semester hours credit.

APPENDIX A

Advisory Council Approval

Tech Prep

"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Funk
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4235

We, members of the Tech Prep Manufacturing Advisory Council have reviewed the attached Tech Prep manufacturing curriculums for Cisne, Oblong and Mt. Carmel high schools.

We feel that these curriculums have the potential of providing students with the quality of academic and vocational training necessary to produce the reading, math, science, communication and technical skills needed by the world class employees of the future. We are in support of the curriculum implementation plans which incorporate the integration of academics and vocational training through applications.

We are particularly in favor of the dual path curriculum developed by Cisne High School. We believe that this approach will most accurately meet the skill levels of students and ultimately the various needs of the future work force. We recommend that other high schools review Cisne's program for possible implementation at their site.

We hereby agree to continue our support of the Tech Prep program and its efforts to develop and implement educational strategies that will prepare students for a lifetime of learning.

Thomas Schnell

RECEIVED
BY
MAY 29 1991
ILLINOIS EASTERN
COMMUNITY COLLEGES

Tech Prep
"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Pauk
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Strickman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4238

We, members of the Tech Prep Manufacturing Advisory Council have reviewed the attached Tech Prep manufacturing curriculums for Cisne, Oblong and Mt. Carmel high schools.

We feel that these curriculums have the potential of providing students with the quality of academic and vocational training necessary to produce the reading, math, science, communication and technical skills needed by the world class employees of the future. We are in support of the curriculum implementation plans which incorporate the integration of academics and vocational training through applications.

We are particularly in favor of the dual path curriculum developed by Cisne High School. We believe that this approach will most accurately meet the skill levels of students and ultimately the various needs of the future work force. We recommend that other high schools review Cisne's program for possible implementation at their site.

We hereby agree to continue our support of the Tech Prep program and its efforts to develop and implement educational strategies that will prepare students for a lifetime of learning.

John Collins

RECEIVED
BY________________
MAY 28 1991
ILLINOIS EASTERN
COMMUNITY COLLEGES

Tech Prep

"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Peak
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4235

We, members of the Tech Prep Manufacturing Advisory Council have reviewed the attached Tech Prep manufacturing curriculums for Cisne, Oblong and Mt. Carmel high schools.

We feel that these curriculums have the potential of providing students with the quality of academic and vocational training necessary to produce the reading, math, science, communication and technical skills needed by the world class employees of the future. We are in support of the curriculum implementation plans which incorporate the integration of academics and vocational training through applications.

We are particularly in favor of the dual path curriculum developed by Cisne High School. We believe that this approach will most accurately meet the skill levels of students and ultimately the various needs of the future work force. We recommend that other high schools review Cisne's program for possible implementation at their site.

We hereby agree to continue our support of the Tech Prep program and its efforts to develop and implement educational strategies that will prepare students for a lifetime of learning.

RECEIVED
BY
MAY 28 1991
ILLINOIS EASTERN
COMMUNITY COLLEGES

Tech Prep

"Preparing the Future Work Force through Integration of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Peak
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4236

We, members of the Tech Prep Manufacturing Advisory Council have reviewed the attached Tech Prep manufacturing curriculums for Cisne, Oblong and Mt. Carmel high schools.

We feel that these curriculums have the potential of providing students with the quality of academic and vocational training necessary to produce the reading, math, science, communication and technical skills needed by the world class employees of the future. We are in support of the curriculum implementation plans which incorporate the integration of academics and vocational training through applications.

We are particularly in favor of the dual path curriculum developed by Cisne High School. We believe that this approach will most accurately meet the skill levels of students and ultimately the various needs of the future work force. We recommend that other high schools review Cisne's program for possible implementation at their site.

We hereby agree to continue our support of the Tech Prep program and its efforts to develop and implement educational strategies that will prepare students for a lifetime of learning.

Donald Z Dunkel

RECEIVED
BY__________
MAY 28 1991
ILLINOIS EASTERN
COMMUNITY COLLEGES

APPENDIX B

High School Implementation Plans

TECH PREP COURSE PLAN
FOR CISNE HIGH SCHOOL
(50-75 QUARTILE)

First Semester Freshman

- English I
- World History or World Geography
- Algebra I
- Physical Science
- Communication Technology
- Physical Education

Second Semester Freshman

- English I
- World History or World Geography
- Algebra I
- Physical Science
- Energy Technology
- Physical Education

First Semester Sophomore

- English II
- Health
- Geometry
- Biology
- Production Technology
- Physical Education

Second Semester Sophomore

- English II
- Driver's Education
- Geometry
- Biology
- Transportation Technology
- Physical Education

First Semester Junior

- English III
- U.S. History
- Algebra II
- Chemistry
- Welding Technology
- Physical Education

Second Semester Junior

- English III
- U.S. History
- Algebra II
- Chemistry
- Welding Techology
- Physical Education

First Semester Senior

- English IV
- Government
- Statistics
- Trigonometry
- Elective
- Physical Education

Second Semester Senior

- English IV
- Resource Management
- Advanced Computer Programming
- Elective
- Elective
- Physical Education

TECH PREP COURSE PLAN
FOR CISNE HIGH SCHOOL
(25-50 QUARTILE)

First Semester Freshmen

-English I
-Keyboarding or Elective
-Introduction to Algebra
-General Science
-Communication Technology
-Physical Education

Second Semester Freshmen

-English I
-Computer Concepts or Elective
-Introduction to Algebra
-General Science
-Energy Technology
-Physical Education

First Semester Sophomore

-English II
-Health
-Intermediate Algebra
-Physical Science or Elective
-Production Technology
-Physical Education

Second Semester Sophomore

-English II
-Driver's Education
-Intermediate Algebra
-Physical Science or Elective
-Transportation Technology
-Physical Education

First Semester Junior

-English III
-U.S. History
-Geometry
-Elective (if Physical Science already taken)
-Tech Prep Elective
-Physical Education

Second Semester Junior

-English III
-U.S. History
-Geometry
-Elective (if Physical Science already taken)
-Tech Prep Elective
-Physical Education

First Semester Senior

-Statistics
-Government
-Welding Technology
-Two Electives
-Physical Education

Second Semester Senior

-Advanced Computer Programming
-Resource Management
-Welding Technology
-Two Electives
-Physical Education

IMPLEMENTATION PLAN FOR TECH PREP COURSES AT CISNE HIGH SCHOOL

Year	T.P. Course	Comments
1991-1992	Introduction to Algebra	This one-year course will replace our Pre-Algebra course. It will involve the same material as the first semester of our Algebra I and incorporate application activities in technical fields.
1992-1993	Intermediate Algebra	This one-year course will replace our Vocational Math course and will deal with material from second semester of our Algebra I course. Activities will integrate algebraic concepts with application problems.

(To implement these two courses our district seeks funding to purchase supplementary materials which have these application activities.)

Year	T.P. Course	Comments
1992-1993	Physical Science	This one-year course will have a lab component that will stress application of ideas. Although seen as a college prep course, we expect our brighter Tech Prep students to develop a deeper understanding of science.
1993-1994	Statistics	This one-semester course will give students a background in probability, graphing data, drawing inferences, and analyzing variance. The course will concentrate on application of statistical techniques to business situations.
1993-1994	Advanced Computer Programming	This one-semester course will offer students "hands-on" experience in programming personal computers. It will emphasize problem solving procedures, debugging, and application of high-level skills to real world problems.

Finally, during this three-year period we plan to modify our English classes to include more application activities to encourage students to develop writing, speaking, and listening skills for technical careers.

EQUIPMENT AND TRAINING NEEDS

Since Cisne High School wants to develop a CADD program (computer-aided drafting and design), our major equipment need is the obtain ten-station computer lab. (See attached specifications for computer equipment at the end of this document.) This Tech Prep lab would serve the needs of our technology courses and be available for other vocational courses such as business and agriculture. To promote integration between academic and vocational instruction, math, science, and English teachers (and their students) would have access to this lab.

The ten 386SX Zenith computers, one laser printer, and related peripherals (a total of $28,995) require appropriate software to have a (CADD) program. We believe Generic CADD 5.0 ($250) will meet the needs of our students. Since our microcomputers will have "Windows 3.0" already installed on hard drives, we do not see a need to purchase other software programs to do basic word-processing, spreadsheets, or database activities. However, we did find an application package know as "Grammatik" ($55) to help students develop grammar skills in writing.

To house this computer lab we need to remodel a storage area in our agriculture room. We estimate a cost of $6,800 for changes in lighting, wiring, a room partition, and door. Included in this figure is the cost of computer tables and chairs, a teacher desk and chair, a storage cabinet, and a chalkboard.

To implement a Tech Prep program we are requesting educational materials which combine academic and vocational concepts: Applied Mathematics ($518.75) and Principles of Technology ($672). We already have the Applied Communication modules.

Our most important feature of our implementation of our Tech Prep program is training of our teachers. This training will include three types activities in the coming school year:

a. Two afterschool in-house workshops presented by Mr. Feather and I. We propose to pay our staff $15 per hour to encourage attendance and participation. Total cost ($450) for VCR tapes on Tech Prep, handouts, and computer disks for teacher use.
b. Six teachers directly involved in Tech Prep (see list on page three) would travel to Bloomington, Indiana, to see how a Tech Prep curriculum in action. To cover the costs of this trip (substitutes, mileage, and lunch) we estimate $475.
c. Mr. Feather and I plan to spend much time working together and with other teachers to share our ideas and enthusiasm for this curriculum change.

To pay for the equipment and training we are seeking funding from Tech Prep sources, a scientific literacy grant, and our local school board.

TECH PREP INSTRUCTORS

The following teachers will be directly involved in implementing our Tech Prep plan:

Mr. Ken Feather-technology	Mr. Charlie Lane-mathematics
Mrs. Libby Pond-science	Miss Cynthia Schwinghamer-math
Mrs. Ruth Smith-computer/math	Mrs. Pat Wolfe-English

In addition we hope to obtain the cooperation of our guidance counselor and administration in changing our approach to teaching.

INTEGRATION OF ACADEMICS AND VOCATIONAL COURSES

The teachers listed above will attempt to coordinate their coursework to mix theory and application activities.

In our math courses we will use the Applied Mathematics modules to show students where they will need to use the concepts we teach. At the same time our technology courses will require students use their math skills to solve problems.

In our physical science course we will use the Principles of Technology material to illustrate scientific ideas. The Wielding, Soldering, and Brazing course will incorporate the science of metals.

Students in English courses will be using the Applied Communication modules. Students in all technology courses will be required to use the word-processing software to write about their energy, communication, production, and transportation activities.

The CADD software in our computer lab will require student to integrate many academic and vocational skills to do their projects.

MARKETING TECH PREP

We are currently forming a Tech Prep committee at Cisne High School. This group includes: two teachers, three students, their parents, our principal, a local businessman, and a member of our school board. This committee will serve as a source of ideas and as a way of spreading the Tech Prep concept.

To inform eighth graders about Tech Prep courses we will continue our spring orientation meeting for these incoming freshhmen. We also will continue our vocational courses for eighth graders at the high school. We also propose a Tech Prep Pizza Party ($425) for eighth graders and their parents to introduce this concept in the Fall of 1991.

We also see value in a monthly Tech Prep news column in local papers. This column, composed on computer and written by a Tech Prep student, would share our successes with the larger community.

Tech Prep Curriculum
Oblong High School

FRESHMAN

1st Sem.	2nd Sem.
English	English
Health	Consumer Education
Math	Math
Science	Science
Intro. to I.T.	Intro. to I.T.
P. E.	P. E.

SOPHOMORE

1st Sem.		2nd Sem.
English II (Applied)		English II (Applied)
Computer Concepts		Computer Concepts
Geometry		Geometry
Earth Science or	(New	Earth Science or
Physical Science	Courses)	Physical Science
Intro. to I.T.		Intro. to I.T.
P. E.		P. E.

JUNIOR

1st Sem.	2nd Sem.
English	English
Social Science	Social Science
Computer I	Computer I
Elective	Elective
Manufacturing I	Manufacturing I
P. E.	P. E.

SENIOR

1st Sem.		2nd Sem.
Tech Prep	(Course yet to be defined)	Tech Prep
Social Science		Social Science
Manufacturing II		Manufacturing II
Elective		Elective
Elective		Elective
P. E.		P. E.

IMPLEMENTATION PLAN FOR TECH PREP COURSES
AT OBLONG HIGH SCHOOL
MAY 91

YEAR	COURSES	COMMENTS
91-92	ENGLISH II (Ms Darling)	Required for all sophomores. Built around an applied communication curriculum. (locally funded)
	EARTH SCIENCE PHYSICAL " (Mr Bayless)	A choice for freshmen. Correlate to Energy and Production respectively. (request $2000 for Earth Science lab)
	SPEECH (Ms McNeil)	English III elective will incorporate part of the states communication curric. activities. (locally funded)
	MATH (Mr Hasty)	Chapter One math will be blended with an applied mathematics curriculum. (locally funded)
92-93	MANUFACTURING I & II (Mr Mowrer)	These classes will be split out from each other. (request $3000 for purchase of two machine shop stations to be purchased in 91-92.
	COMPUTER INFO PROCESSING	This course may be team taught by the Computer Science and Ind Tech teachers.

MARKETING STRATEGY

A seperate handbook/curriculum guide will be sent home with all 8th graders prior to orientation day in 91-92.

5/1/91
Approved
S.W.

TECH PREP CURRICULUM
MT. CARMEL HIGH SCHOOL

FRESHMEN

1st. Sem.	2nd. Sem.
1. Eng.________	1. Eng.________
2. Math._______	2. Math._______
3. Sci.________	3. Sci.________
4. P.E.________	4. P.E.________
5. Lunch_______	5. Lunch_______
6. I.D. Tech. Comm.	6. I.D. Tech. Trans.
7. Elective____	7. Elective____

SOPHOMORE

1st. Sem.	2nd. Sem.
1. Eng.______	1. Eng.________
2. Math.______	2. Math._______
3. Health_____	3. P.E./Dr. Ed.
4. P.E./Dr.Ed.	4. Lunch
5. Lunch______	5. Elective____
6. I.D. Tech. Energy	6. I.D. Tech Manufac.
7. Elective___	7. Elective____

JUNIOR

Juniors have 3 Electives - Industrial Options available are:

1. Wood Manuafacturing
2. Metals Manufacturing
3. Graphic Communications
4. CAD Drafting

1st. Sem.	2nd. Sem.
1. Eng.______	1. Eng.________
2. U.S. Hist.	2. U.S. Hist.
3. P.E._______	3. P.E.________
4. Lunch______	4. Lunch_______
5. ___________	5. ___________
6. ___________	6. ___________
7. ___________	7. ___________

SENIOR

Seniors have 4 Electives - Industrial Options are:

1. Wood Manufacturing
2. Metals Manufacturing
3. Graphic Communications
4. CAD Drafting

1st. Sem.	2nd. Sem.
1. Econ._______	1. Am. Gov't.___
2. P.E. _______	2. P.E.________
3. Lunch______	3. Lunch________
4. ___________	4. ___________
5. ___________	5. ___________
6. ___________	6. ___________
7. ___________	7. ___________

To: Debra Moll Hunter, Director
Tech Prep
305 West Street
Olney, Illinois 62450

Date: April 22, 1991

From: Gene Sams, Board of Governance Member
Kathie Flood, Bill Geurin, Roger Peterson
Tech Prep Development Committee Members

Regarding: Implementation and Integration of Tech Prep Mt Carmel High School, English II level for the 1991-1992 school year

Overview: During the past 10 months The Tech Prep Development Committee actively met monthly with Tech Prep Director, Debra Hunter and two other pilot school Tech Prep Committee members. During this time, the Tech Prep Development Committee members toured area wide businesses and industries, met with the area Industrial Advisory Council who provided the members with Industry and Manufacturing skills needs and in addition the Committee visited a Tech Prep facility. Here Tech Prep facilitators demonstrated the hands on approach making available to members classrooms and in place Tech Prep Activities. Further, the Committee was presented curriculum development ideas and packaged programs by Brenda Yates and apprised of the state's goals for Tech Prep by Scott Edgar and Jerry O Hare.

I. Implementation/Integration Tech Prep at the English II level, Mt Carmel High School.

   A. English IIA (First Semester)
   Text: Language: Structure and Usage

   15 Applied Communication Modules, Student worktext, Instructor's guide and accompanying VHS Scenario Formats.

      1. Text: Chapter 5 Approriate English-Integrate with Module 2, Gathering and Using Information in the workplace.

      2. Text: Chapter 9 Logical Comparisons-Integrate with Module 5 Communicating with Co-Workers.

3. Speech Unit: Informative-Integrate with Module 1 Communicating in the Workplace.

   Persuasive Speech: Integrage with Module 9 Presenting Your Point of View.

4. Compositions: Integrate and correlate with Module 7 Following and Giving Instructions.

B. English IIB (Second Semester)
Text: Encounters (Literature)

15 Applied Communication Modules, Student worktext, Instructor's guide and accompanying VHS Scenario Formats.

1. Crosscurrent Unit: Deals with internal conflicts Integrate Module 12 Communicating to Solve interpersonal Conflict.

2. Life's Ironies Unit: Selections contain problematic situations-Integrate Module 3 Using Problem Solving Strategies and or Module 5 Communicating with Co-Workers.

II. In Place Integration at Mt Carmel High School.

A. Vocational/Academic classroom activities in place directly relate to Module 6 and 7, Participating in groups and Following and Giving Instructions, respectively.

1. Freshmen Level-Earth Science and General Science Group participation weekly, using notes presenting chapter info and problems.

2. English Fresh/Sophomore levels-Groups of 4 or 6 present a short story or an act of a play working out Character conflicts.

   Composition: Students give direct ions from their home to school, using paragraph form and maps, presented in panels.

3. Industrial Technology-Fresh/Sophomore level-Individually and in groups, students use maps and written instructions getting from the High School to their homes, to the post office and back.

4. Junior/Senior Level-Industrial Technology. Class set up as a business with each one being Manager for 3 weeks overseeing both individual and group reports and projects.

III. Materials, Equipment and Training Needs.

A. 15 Applied Communications Modules, Student Worktext, Instructor's Guide and accompanying VHS Scenario formats.

Computers, computer 2-ply paper, computer disks, computer printers and copy machinne.

B. Training for Instructors, Workshops, Seminars and Applied Module application.

To implement these courses and the Tech Prep Program, our school district seeks funding for supplementary materials and equipment and training for instructors.

IV. Implementation/Integration Tech Prep 1992-1993.

A. MCHS plans to integrate Algebra I and Earth Science in the Tech Prep program.

APPENDIX G

Articulation Agreement

TECH PREP COORDINATION AGREEMENT

BETWEEN

the

Clay, Jasper, Richland and North Wayne Regional Vocational System,
Twin Rivers Regional Vocational System,
Edwards, Wayne, Wabash and White Regional Vocational System

and

Illinois Eastern Community Colleges, District #529

1. **Statement of Purpose:** This agreement is made between the Clay, Jasper, Richland and North Wayne Regional Vocational System, the Twin Rivers Regional Vocational System, the Edwards, Wayne, Wabash and White Regional Vocational System, hereinafter referred to as the "SYSTEMS" and Illinois Eastern Community Colleges, District 529, hereinafter referred to as the "COMMUNITY COLLEGE." The purpose of this agreement is to provide a procedure which will enable students from the SYSTEMS to continue their education and training at the COMMUNITY COLLEGE through coordinated curricula which insure continuity of instruction, eliminate unnecessary duplication of training or education, provide employer specified work skills, and allow for student transfer to senior institutions.

2. **Occupational Program Coordination:** A Board of Governance, hereinafter referred to as the "TECH PREP BOARD" will be formed to oversee the terms of this agreement. The membership of the "TECH PREP BOARD" will consist of the three directors of the regional vocational systems, the Director of Educational Services and a representative of each of the COMMUNITY COLLEGES. The TECH PREP BOARD will consider issues relating to:

   A. Program offerings of the SYSTEMS and the COMMUNITY COLLEGE which are in the same area of study,

   B. Offerings at either the COMMUNITY COLLEGE or through the SYSTEMS which have potential for coordination at the other level, and

   C. Programs not now offered at either level which show potential employment for completers in the SYSTEMS or COMMUNITY COLLEGE district.

The TECH PREP BOARD will meet regularly to identify programs of study which can be coordinated between the SYSTEMS and the

COMMUNITY COLLEGE and senior institutions. Recommendations in regard to this agreement will be forwarded to the Boards of Control of the SYSTEMS and the Board of Trustees of the COMMUNITY COLLEGE for review and approval.

Tech Prep curricula will be developed by various Tech Prep committees which will include representatives of the SYSTEMS, COMMUNITY COLLEGE, business and industry, and senior institutions. Program specific personnel and instructors from the SYSTEMS and the COMMUNITY COLLEGE will be selected by the TECH PREP BOARD for the purpose of assisting with coordination. Instructors from the SYSTEMS and the COMMUNITY COLLEGE will meet to review curricula and recommend coordinated curricula which will contain sequenced instruction based on business and industry advice. Appropriate coordinated curricula will be articulated with senior institutions. A process for curriculum and student services articulation will be implemented which is consistent across the SYSTEMS and the COMMUNITY COLLEGE. The process for student services may include coordination of guidance and counseling, student records transfer, placement, special needs and follow-up functions. Coordinated curricula recommended by the advisory committees and the TECH PREP BOARD will be submitted to the Boards of Control of the SYSTEMS and COMMUNITY COLLEGE before implementation. Approved Tech Prep curricula will be attached to this agreement as amendments.

3. **Student Transition:** The major objective of this agreement is to allow a student to transfer without unnecessary delay or duplication in the student's training or education as long as the student satisfies the general and/or program-specific entrance requirements of the COMMUNITY COLLEGE.

It will be the responsibility of the TECH PREP BOARD to recommend policies and determine procedures by which the following may occur:

A. A method for developing and providing a planned sequence of courses for each selected curriculum,

B. A method for granting college credit for high school learning as long as the award for said credit is properly funded by the State and not in violation of rules promulgated by the Illinois State Board of Education or the Illinois Community College Board,

C. Procedures, to include scheduling, by which secondary level students will be able to enter post secondary instruction without any break in the continuity of their education or training,

D. A method by which post secondary students may acquire skills which are only available and provided by the secondary schools,

E. A method and procedure by which secondary students may utilize post secondary programs for enrichment, combined enrollment and contracted courses/programs.

F. Procedures which will provide for students completing a Tech Prep curriculum at the community college to transfer to a senior institution.

4. **Joint Use of Facilities, Equipment and Staff:** The principles of need, cost and quality will be the prime consideration when determining use of facilities and staff.

The TECH PREP BOARD shall be responsible for reviewing the three factors noted above and for making recommendations to the Boards of Control of the SYSTEMS and the Board of Trustees of the COMMUNITY COLLEGE. The TECH PREP BOARD will encourage the use of sharing instructional resources and facilities as well as personnel. It will encourage the development of relationships and procedures to share equipment and exchange personnel with business and industry. The TECH PREP BOARD will propose coordinated programs to the SYSTEMS and the COMMUNITY COLLEGE for implementation. New coordinated programs will require prior approval by the COMMUNITY COLLEGE and the SYSTEMS prior to implementation.

5. **Planning, Evaluation and Program Improvement:** Continual planning, evaluation and program improvement activities involving faculty and staff of the SYSTEMS and COMMUNITY COLLEGE will be a part of this effort. The Program Evaluation System required and approved by the Illinois Community College Board and Illinois State Board of Education will be used as a vehicle to assess program effectiveness and need.

6. **Program Cost:** Financing instruction which is provided jointly by both the SYSTEMS and the COMMUNITY COLLEGE will be determined jointly with mutual consent and approval from the Boards of Control of the SYSTEMS and the Board of Trustees of the COMMUNITY COLLEGE.

7. This agreement will be reviewed on an annual basis by the TECH PREP BOARD. Amendments and modifications must be approved by the Boards of Control of the SYSTEMS and the Board of Trustees of the COMMUNITY COLLEGE prior to implementation. The agreement may be terminated by either party with one year's written notice to the other party.

Chairperson, Board of Control
Clay, Jasper, Richland and
North Wayne Regional Vocational
System

Kent L. Wattleworth, Chairperson
Illinois Eastern Community
Colleges, District #529
Board of Trustees

Chairperson, Board of Control
Twin Rivers Regional Vocational
System

Chairperson, Board of Control
Edwards, Wayne, Wabash and White
Regional Vocational System

APPENDIX H

Communiques

TECH PREP COMMUNIQUE

WELCOME to the Tech Prep Communique. This newsletter is designed to keep you, the educators and manufacturers involved in Tech Prep, abreast of new developments in the Tech Prep initiative and to broaden your understanding of new techniques in manufacturing and education. My goal is to make the Communique an open forum for exploring innovative approaches to manufacturing and education. In order to accomplish this, I will need your articles and ideas for each month's newsletter. I would like to have an article written by an educator and a manufacturer for each newsletter. I foresee these articles as being written in a "show and tell" format. I would also like to publish editorials and opinion-based features. Contributions will also be taken for clip-art, especially those done by students, humorous anecdotes and miscellaneous articles that will help you get the most from this monthly publication.

Please send contributions to:
Debra Hunter
Tech Prep Director
305 North West Street
Olney, IL 62450

WHAT IS TECH PREP?

Tech Prep represents an educational initiative that integrates college preparatory course work with technical education. It is a planned sequence of courses, both academic and technical, that begins in 9th grade and continues through community college courses leading to an associate degree. Because Tech Prep prepares students for a lifetime of learning, it also provides preparation for advanced education such as a four-year baccalaureate degree. Tech Prep also prepares students with the skills and competencies necessary to meet employer's performance standards, not only for entry-level jobs, but also for career advancement.

Eighteen Tech Prep programs have been funded throughout Illinois. We are one of five of these programs specifically designated to create curriculums in manufacturing. Our planning grant goes until June 30, 1991, with a high probability of being refunded for FY 92. The goals for this planning year are to:

(1) Determine the skills necessary to be a productive and valued employee. An Industrial Advisory Council has been formed to assist in this endeavor.

(2) Develop curriculum at each high school that will articulate with revised programs at Illinois Eastern Community College campuses. Faculty members from the three high schools and colleges have been selected to carry this out.

(3) Integrate academic and vocational teaching practices.

(4) Formulate a three-year implementation plan.

Much has occurred in the three months that the Tech Prep initiative has been underway. The Board of Governance selected the Project Coordinator, Debra Moll Hunter, and the Development Committee. The Development Committee selected the Industrial Advisory Council. Tech Prep sponsored a manufacturing technology teleconference and tours of industry and schools. High school vocational classes have been surveyed, and a survey instrument has been developed to poll industry.

Because Tech Prep is a new initiative for Southeastern Illinois and the state, we are constantly forging new ground. Therefore, any and all suggestions, concerns and comments are welcome and encouraged.

RESOURCE CORNER

We currently have a number of videos available for viewing:

Technology Revolution: Manufacturing of the 90's (90 min)

This tape of the teleconference consists of three sections. The first details the changes in manufacturing, and includes a very good Macentosh segment filmed at their California plant. It outlines the various processes in a high tech manufacturing plant.

Section Two previews the changes of electronics in automobiles. The final section reviews how space technologies have influenced manufacturing and features a particularly interesting segment on virtual reality.

Critical Thinking (Two 60 min. programs)

"Critical Thinking and the Human Emotions"

Most instruction is designed without an adequate understanding of the profound role of human emotions and passions in learning. In this program, Carol Tavris, distinguished social psychologist and author of "Anger: The Misunderstood Emotion" engages in a lively discussion on the relation of disciplined thought to emotions and passions. Many of the traditional views of reason and emotion are critiqued in this session, and the implications for education emerge vividly.

"Infusing Critical Thinking into Community College Instruction"

For critical thinking to become a significant force in student learning, it is essential that it permeate instruction across the disciplines. Unfortunately, students do not arrive on campus with developed critical thinking abilities and most professors are unsure how they can cover essential content and also foster critical thinking. In this program, faculty development leaders from five diverse community colleges discuss their strategies for making critical thinking central to instruction.

Both of these programs have some valuable information, however, the presentation is a little dull.

Amax Coal - Wabash Mine Video (30 min.)

This tape comes to us from Thomas Schnell, Industrial Relations Representative for Amax Coal Company and member of the Industrial Advisory Council. It details the mining process at the Wabash mine.

THE GENDER GAP AND COMMUNICATION

It is a well knows fact that men and women have different subject preference when they communicate. But few people realize that the genders have a documentable difference in the manor in which they communicate. Jane Tear, a New York specialist on gender dynamics in the work place has developed a chart that reflects the typical male/female differences.

Learning to understand the fundamental differences will make it easier to communicate without misinterpretation caused by delivery variances. It also helps to solidify that men are men and women and women, and that efforts should be made to understand these differences and grow from them.

CONVERSATIONAL STYLES
Gender Tendencies

Listening:

Male --
* irregular eye contact
* infrequent nodding
* infrequent humming sounds
* may continue another activity while speaking
* interrupts in order to speak
* questions are designed to analyze speaker's information

Female --
* uninterrupted eye contact
* frequent nodding
* frequent humming sounds
* usually stops other activities while speaking
* waits for pauses in order to speak
* questions are designed to elicit more information.

Speaking:

Male --
* few pauses
* may abruptly change topic
* speaks until interrupted
* speaks louder than previous speaker
* frequent use of "I" and "me"
* personal self-disclosure rarely included
* Humor delivered as separate jokes or anecdotes
* humor often based on kidding or making fun of others

Female --
* frequent pauses
* connects information to previous speaker's information
* stops speaking when information delivered

* uses same volume as previous speaker
* frequent use of "us" and "we"
* personal self-disclosure often included
* humor interwoven into discussion content
* humor rarely based on kidding or making fun of others

BEST COPY AVAILABLE

BOOK REVIEW

Suzaki, Kiyoshi. (1987). The New Manufacturing Challenge. New York: Free Press.

Kiyoski Suzaki has worked for the last several years as a consultant to numerous Fortune 500 companies. He has helped these companies implement just-in-time production, total quality control and total productive maintenance. The techniques he taught are described in his book, The New Manufacturing Challenge.

Suzaki begins his book by reviewing the seven wastes of industry as identified by Toyota, and how these wastes affect a company's efficiency and profit margins. He goes on to state that to remain competitive, a company must create diverse products with short production lead time. This can only be accomplished through quick set up time. "By decreasing set up time and lot size, inventory levels will be reduced as well as production lead time so that the factory operation will become flexible enough to respond to the changing market demand."

Suzaki believes a product-oriented factory layout will eliminate the waste associated with process-oriented layouts and create a smooth production flow. Focusing on the ideal production flow throughout the factory, the few problems associated with product-oriented layout, such as line imbalance, machine breakdowns, quality considerations and absenteeism can be overcome.

Product oriented factory layout requires operator input to be effective. Therefore, it is essential to competitiveness that employees skills be continually upgraded through training and job rotation. This requires a change in company practice for most manufacturers. Suzaki feels companies should look at these changes as the "entrance fee we all have to pay in order to play the game of business".

When improved operator skill is combined with the flow production concept, manufacturing processes become streamlined and more productive. Suzaki puts it this way, "While the application of the concepts of flow production and multi-process handling will substantially improve labor productivity, quality and production lead time as well as inventory and floor space requirements, we should remember that each improvement should not be seen as an isolated event". These closely linked processes of this streamlined production require careful monitoring of quality and machine status.

To do this, a feedback system needs to be developed. Suzaki compares these systems to the

LOGICAL THINKING ASSIGNMENT

In the April, 1990, edition of the Adjunt Mentor, an article appeared that described a writing assignment that stressed the development of logical thinking called Thought-Papers. Thought-Papers are structured written exercises that encourage students to express their ideas. In one page or less, students are asked to express why these ideas are important in a logical progression of thought. Evaluation should be made on the evidence of the student's ability to organize and develop their ideas and express them clearly.

Examples of Thought-Paper assignments were given as:

* What do you think are the key issues expressed in this reading assignment or discussion?

* Create your own definition of ....

* Compare your thinking with that of the class during the discussion of ....

* Evaluate your method for solving the assigned problem.

The objective should be to ask a question that is open to interpretation and evaluation and to promote critical thinking.

Thought-Papers are also effective as a basis for small group discussions. The article suggests that group members read each others paper and explain to the group what the writer was saying. The writer is then given a chance to clarify any misunderstandings. Once these corrections have been made, the group is encouraged to discuss the thought process and content of each paper.

COMING

February 4:
Industrial Survey distributed

February 5:
Development Committee and Advisory Council Meeting

February 18:
Newsletter communique contributions due to Debra

February 20:
Development Committee Meeting

February 26:
Communique distributed

BEST COPY AVAILABLE

TECH PREP COMMUNIQUE

TECH PREP UPDATE

The Development Committee met February 20th. The meeting began with a tour of Cisne High School. Ken Feather and Charlie Lane showed the high school's ten computer stations and vocational labs. The meeting was then adjourned to the Wayne County Bank. Brenda Yates of the Illinois Curriculum Revitalization Program discussed the need for integrating academic and vocational concepts. She also explained a variety of curriculum guides and gave committee members an opportunity to browse through her material and collect order information. For more details, ask a Development Committee member or me.

As the meeting continued, Tech Prep curriculum goals were outlined. It was determined that some details should wait until more progress has been made on the curriculum.

After lunch, Jerry O'hare and Scott Edgar, State Tech Prep Coordinators, explained the latest development in Tech Prep at the state level. It has been determined that all approved grant applications for FY 92 will receive a minimum of $60,000 with an ability to request up to $100,000. Complete details of the application process will be given to all Tech Prep directors March 5. Scott and Jerry also answered a number of questions from the Development Committee.

For the remainder of the meeting, the committee was divided into respective high school groups and progressed toward the outlining of Tech Prep high school and college course sequences. The outlines are scheduled for completion at the Development Committee's next meeting on March 8 at Olney Central College.

BOARD OF GOVERNANCE MINUTES

Members Present: Eula Adams, Mary Beth Stine, Scott Hamilton, Angelo Abbott, Gene Sams, John Arabatgis, Kenton Peak, Bob Boyles, Sandy Barbre for Jim Taylor, and Debra Moll Hunter, Director.

Debra reviewed the Tech Prep program up to the present time. Information on the Hoosier Hills Area Vocational School tour was also distributed. A handout listing the goals for the Tech Prep program was distributed to Board members present.

One hundred thirty-four (134) area industries have been contacted to request information regarding individual companies. At the present time, three companies have responded. The materials received can be used for curriculum development only--not for general publication.

A news release has been sent to area newspapers publicizing the Tech Prep program.

A meeting for Tech Prep project directors and counselors will be held at the Illinois State Board of Education on March 5, 1991, beginning at 9:30 a.m. The meeting is scheduled to last until 3:00 p.m. with a working lunch. Guidance counselors from both a secondary and a post secondary school involved with this project are invited. There will be a registration fee of $10.00 which includes coffee, rolls and lunch. Preregistration is to be completed by February 22, 1991. Debra will contact counselors and distribute the agenda to Board of Governance members.

Scott Hamilton recommended that the Board go to the Tech Prep conference being held at Jumer's Chateau in Bloomington, Illinois, on June 13 and 14. The conference is to assist local agency personnel in planning and implementing educational programs which will integrate curriculum and therefore improve student's preparation for work and/or further education. Further details will be available at a later date.

One area that Debra will check on will be articulation agreements with four-year institutions--Southern, Eastern, etc. Also by the end of this year, the Director will complete the following:

1. A Tech Prep curriculum that specifies what students will be taking from 9 to 14th grades. Articulation will be with the community college.
2. A specific subject area will be targeted in each participating high school.
3. Publicize Tech Prep and begin working with teachers. It was suggested that a workshop could be held in late April.
4. A marketing plan will be presented to the Board. The marketing plan will be as wide and diverse as possible. Communication will be developed for all three project high schools, four community college campuses, and school boards of education.
5. A Tech Prep day will be designed to present informaiton to high school students. A variety of information will be available.

BOARD MINUTES CONT.

Debra reviewed the proposed budget changes. Motion by Scott Hamilton and second by Mary Beth Stine to approve the budget changes pending verification of SURS liability. All ayes. Motion carried.

The meeting was adjourned at 3:30 p.m.

Submitted by

Sandy Barbre,
Acting Secretary for
Dwight Mobley

Tech Prep administrative committees

The Board of Governance who oversees the administration of the grant is:

Eula Adams
Clay/Jasper/Richland/North Wayne Delivery System

Scott Hamiton, Director
Twin Rivers Regional Delivery System

James Taylor, Director
Edwards/Wabash/Wayne/White Delivery System

Angelo Abbott, Dean
Olney Central College

John Arabatgis, Dean
Lincoln Trail College

Bob Boyles, Program Director
Adult and Continuing Education
Frontier Community College

E. Kenton Peak, Director
Educational Services
Illinois Eastern Community Colleges

Gene Sams, Principal
Mt. Carmel High School

Bill Steichman, Superintendent
North Wayne School District

Sandra Ward, Principal
Oblong High School

The members of the Development Committee will be creating the Tech Prep curriculum for Oblong, Cisne and Mt. Carmel that will articulate with modified programs at the Illinois Eastern campuses. They are:

Cisne High School
  Charles Lane
  Ken Feather

Lincoln Trail College
  Dan Polgar
  Lonnie Devin
  Bill Payne

Mt. Carmel High School
  Kathie Flood
  Bill Geurin
  Roger Peterson

Oblong High School
  Kurt Mowrer
  Joe Bayless

Olney Central College
  Bob Haney
  Jim Majernik

administrative committees CONT.

Wabash Valley College
Bob Effland
David Hunter

An Industrial Advisory Committee has been formed to aid in determining the skills manufacturing employees will need for a productive and rewarding technical career. The companies and their representatives who will be assisting in the Tech Prep initiative are:

Web Printing Controls
Allen Endsley
Personnel Administrator

Snap-On Tools
Donald Dunkel, Total
Quality System Manager
Tom Wood, Operator

Thordarson-Meissner, Inc.
Nancy Garrett, Personnel

Pioneer Labels, Inc.
Phil Freeman

E. H. Baare Company
Mike Uptmore
Production Control Manager

Indian Refining
Jim Thompson, President

Oak Valley Wood Products
Jeffrey Watson,
Vice President

Sunbeam Plastics
Denise Terveer
Human Resource Assistant

Pacific Press and Shear
Bob Wonsetler
Executive Vice President
of Engineering

Champion Laboratories
Ron Burger
Manager Tool Engineering

Hella Electronics Corporation
Jerry Botkin, Production

Sparton Manufacturing
Mike Knapp, Director
Employee Relations

Amax Coal
Tom Schnell
Industrial Relations
Representative

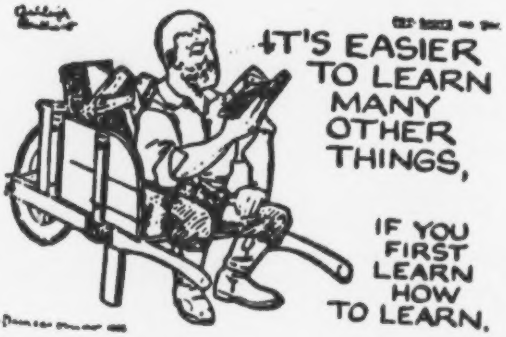
Carmi Molded Rubber
Dennis Jacobs
Human Resource Manager

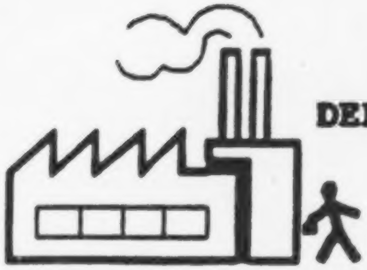
Emerson Radio Corporation
Brenda Vatlin
Technical Manager

Leaf, Inc.
John Collier
Personnel and Training
Supervision

The Director of the Tech Prep program is Debra Hunter. She can be reached at (618) 395-4351, Ext. 2285 for additional information.

* * *


IT'S EASIER TO LEARN MANY OTHER THINGS,
IF YOU FIRST LEARN HOW TO LEARN.



DEFINITION OF MANUFACTURING TERMS

CAD = Computer Aided Design or Computer Aided Drafting utilizes programs such as AutoCAD, VersaCAD, CADkey

CAM = Computer Aided Manufacturing - machine instructions generated from computer aided drafting programs; computers used to run machine tools

CIM = Computer Integrated Manufacturing -- there are two definitions:

1. The linking of all manufacturing processes with a computer.

2. A manufacturing philosophy in which the computer is central to the elimination of waste and increase in efficiency.

JIT = Just in Time - a method of having the right product in the right quanity at the right place at the right time.

SPC = Statistical Process Control - the method of improving quality through the analysis of deviation from optimum tolerance and adjusting to meet set norms.

AGV = Automatic Guided Vehicle - a material transportation device that moves usually heavy materials throughout a plant which are routed by a central comuter and guided by wire, radio frequency, floor tile, etc.

ROBOT = An electro-mechanical device that moves in three or more axis which is programmed to carry out a sequence of moves, most often used to weld or paint.

WIP = Work in Progress - the inventory throughout the plant which is not completed.

BAR CODE = A series of solids and voids which represents a code that interacts with information from a data base. Can be read quickly and accurately.

AUTOMATIC RETRIEVAL SYSTEM = A storage system that is activated by a computer and removed and stored by a variety of electro/mechanical devices.

TQC = Total Quality Control - the process of not moving a product to the next manufacturing station until it is 100% perfect.

MRP II = Manufacturing Resource Planning - computer programs that assist in the efficient utilization of all resources, i.e., labor, machines, work loads.

MRP = Material Resource Planning utilizes JIT concept in the management and disbursement of materials and products.

QUALITY CIRCLE = A heterogeneous team of employees who work to improve production processes to achieve higher quality.

BEST COPY AVAILABLE

DISNEY & CIM

Probably the finest example of CIM philosophy in a non-manufacturing company is the Walt Disney Company. For over half a century, Disney's management has reflected the style now advocated CIM purponents. Disney believes that open, friendly communication, team effort and a willingness to be creative, open minded and dynamic is essential. Walt Disney put it this way, "There's really no secret about our approach, we keep moving forward, opening up new doors, doing new things because we're curious, and curiousity keeps leading us down new paths. We're always exploring and experimenting" (Disney Corporation, 1981.)

If you think of an EPCOT Center guest as raw material that Disney processes through attraction factories to produce a completed product of experience, it becomes easier to corrolate ideas between manufacturing and EPCOT. It then becomes easy to understand that the transportation systems employed by Disney are the same as those used in manufacturing. Since the transportation of products is a critical aspect of CIM philosophy, it is worth exploring two examples of transportation at EPCOT.

The Horizons Pavilion presented by General Electric uses a suspended gondola system similar to overhead conveyors used in many manufacturing companies, to move 2500 guests each hour through various auto-animatronic scenes of life in the future. These auto-animatronic scenes are operated independent of the gondolas. A system to link the gondola to the scene regardless of the speed the gondola is traveling became necessary. The solution was to have the audio amplifiers transmit infra-red LED signals. As the gondola passes the scene, a magnetic reed switch activates the LED transmitter, the gondola picks up the signal and feeds sound to the speakers within the gondola.

The principle of the gondola reacting to transmitted signals from the environment are the same as an overhead conveyor basket in a production process receiving a transmitted signal that activates a motor and causes the Work In Progress (WIP) to be turned in preparation for the next process.

In the Universe of Energy presented by Exxon, another transportation device is used to move people through an exhibit of dinosaurs. Because the attraction begins and ends in a movie theater format, six traveling theater cars accomodating 100 guests each were employed. These theatrical cars are large Automatic Guided Vehicles (AGV) which use on-board micro processors and sensing units to detect signals from an 1/8 inch computer controlled floor wire. The vehicles travel one to two feet per second on linear induction motors that are imbedded in the floor or on-board. These AGV's are the same as those used by manufacturers to move WIP from one process station to another. Like those used in the Universe of Energy, AGU's can be

BEST COPY AVAILABLE

DISNEY & CIM

programmed to go to a variety of locations carrying a variety of things.

The most valuable concept to be learned from Disney's transportation systems is not their technology, but their layout and design. As manufacturers struggle to improve plant layout, they often must think like Disney. When analyzing factory layout thinking of the process as a ride and you as a product in progress, it will be easier to see potential problems. As a WIP guest, are you kept waiting for a process? Is there something else that could be happening to keep you entertained? Are you toured from one end of the building to the other for no reason? By getting into the process and analyzing the factory as an attraction, the efficiency of the layout will improve because of the removal of waste.

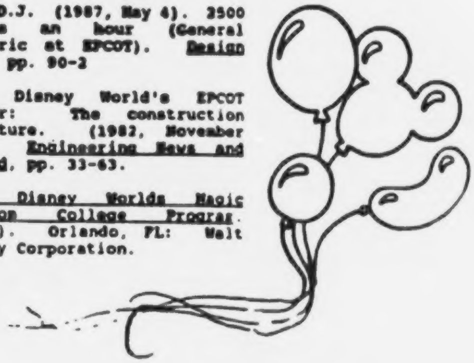
Disney's ability to move thousands of guests safely and efficiently is a salute to computer integration. By reviewing Disney's achievements, it is easier to understand the manufacturing industry's CIM Technology.

BIBLIOGRAPHY

Bak, D.J. (1987, May 4). 3500 guests an hour (General Electric at EPCOT). Design News, pp. 90-2

Walt Disney World's EPCOT Center: The construction adventure. (1982, November 25). Engineering News and Record, pp. 33-63.

Walt Disney Worlds Magic Kingdom College Program. (1981). Orlando, FL: Walt Disney Corporation.



ST. PATRICK'S DAY

Every year on March 17th, people across the country wear green, consume corn beef and green beer, and blab blarney. Saint Patrick's Day has long been a day to rejoice in your Irish heritage or lack thereof. But, have you ever stopped to think about who we have to thank for this day of celebration?

St. Patrick was born in Scotland in 387 to Calphurnius, a high ranking Roman. (Aren't you glad he wasn't named Calphurnius, Jr.?) At age sixteen, Patrick was captured by Irish marauders and sold as a slave. He spent six years in servitude to a chieftain high priest where he learned the Celtic language. Upon escape from capture, he fled to Britain where he spent eighteen years training in monasteries. In the Summer of 433, he returned to Ireland under the commission of the Pope. He preached and taught throughout Ireland, building churches and organizing parishes. He escaped from the druids twelve times before his death on March 17, 493.

One story about St. Peter that is tied closely to today's celebration of St. Patrick's Day is that of the shamrock. It is said that in an effort to explain the trinity to the Irish people, St. Patrick picked a shamrock. The three leaves he delineated represented the three persons of the trinity, the stem on which they grew represented the godhead and was symbolic of the unity of three in one.

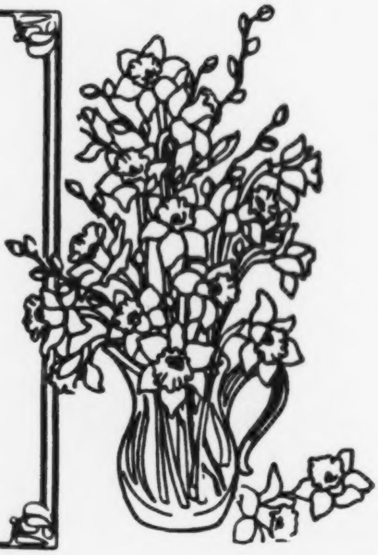
Well, now you know a little bit about the man we honor each year with green rivers and parades. Knowing this might not make your green beer taste any better, but at least you can entertain the lads and lasses with you.

TECH PREP

Debra Moll Hunter, Director
305 N. West Street
Olney, IL 62450

COMING IN MARCH:

1 IECC Holiday
4 High Schools Closed
5 State Tech Prep meeting Springfield -- Director and Counselors
12 Advisory Board Meeting
17 St. Patrick's Day
18 Communique Articles Due
21 Communique Mailed
25 - 29 IECC Spring Break
27 - 29 Cisne Spring Break
29 Good Friday-Schools Closed



TECH PREP COMMUNIQUE

The Industrial Advisory Council met on March 12, 1991, in the Board Room at Olney Central College. Those in attendance were: John Collier, Leaf; Dennis Jacobs, Carmi Molded Rubber; Tom Schnell, Amax Coal; Mike Knapp, Sparton Manufacturing; and Ron Burger, Champion Laboratories; Debra Hunter and one guest, Jim Taylor, Regional Vocational Director for Edwards/Wayne/White/Wabash Counties.

The meeting began with a viewing of the new state-produced Tech Prep video. Following the video, the council discussed the difference between a high school Tech Prep graduate and a Tech Prep associate degree recipient. It was unanimously agreed that a high school Tech Prep graduate would qualify for general labor positions, whereas, an associate degree graduate would be hired for technical/skilled positions. At both levels of entry, successful completion of the Tech Prep program would warrant preference for hiring, apprentice programs and advancement.

The council felt that a Tech Prep completer would need to provide interviewers with a transcript showing successful completion of all Tech Prep course work with a "C" average and a resume of detailed experiences. It was recommended that the Tech Preppers use their counselors as references so employers can acquire additional information for transcript interpretation.

The group was questioned about the benefits of a Tech Prep test given at both the high school and college level in which the scores would be made available to employers for hiring purposes. The council felt that because of the legalities of employment based on test scores and the enormous task of developing a nondiscriminatory test that would provide valid results, it would not be worth any benefit they might receive. It was again pointed out that a resume, transcript and references provided by the applicant is sufficient to determine hiring potential.

Industrial Advisory Council CONT.

To make this a reality, the council recommends that resume writing and interviewing techniques be taught at the high school level. It was also suggested that:

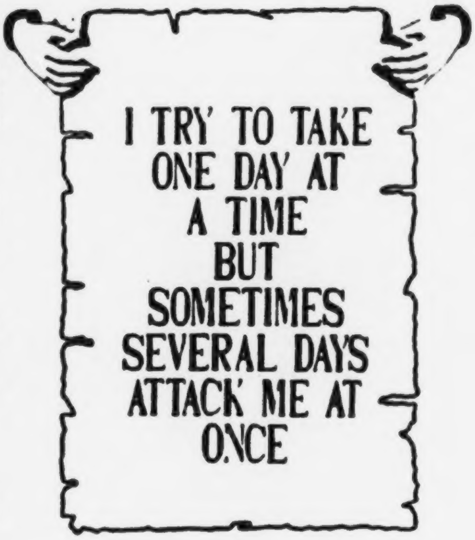
- Wage vs. cost of living be reviewed (perhaps in a math class) so students understand that the higher wages paid in large cities and other areas does not mean a higher standard of living. They felt this training would help students realize that Southeastern Illinois is on par, wage wise, with other areas.

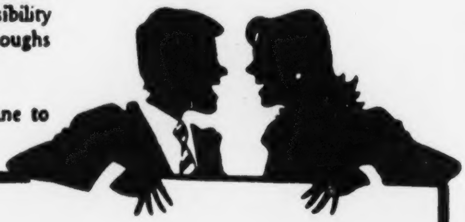
- Safety be taught at all levels because unsafe behavior is often the basis for dismissal in the manufacturing arena. The council believes that industry representatives can help schools provide this training.

Drug use is an issue that the council feels should be strongly stressed. Most large companies require drug testing at the time of the interview, and they will not hire anyone who does not pass their test. They urge all Tech Prep students to agree to be drug free while in the program, and that the consequences of drug use become part of the Tech Prep curriculum.

The meeting concluded with a discussion of work place learning. Agreement was felt that students should be exposed to real work situations but because of the legalities of having people under the age of 18 around hazardous equipment, a high school school level program will be hard to implement. They highly recommended a college level co-op or internship program but were leary of mandating one because of the possible lack of positions. The council suggested that feasibility studies on shadowing for high school students and video walk-throughs of area industries be conducted.

The next advisory council will be in May or early June to approve the Tech Prep curriculum.





The COMMUNIQUE needs your ideas. To be a truly effective forum for exploring innovative approaches to manufacturing and education, we need a variety of perspectives. Please send your contribution to: Debra Hunter, Tech Prep Director, 305 North West Street, Olney, IL 62450

REVIEW OF STATE TECH PREP MEETING

Debra Hunter, along with Bill Geurin from Mt. Carmel and Kenton Peak, attended the state sponsored Tech Prep meeting for directors and counselors. The two objectives of the meeting were: (1) to give directors and counselors an opportunity to share what is happening in their Tech Prep programs, and (2) to provide information on refunding procedures.

Objective 1. A variety of opportunities was given to learn of various Tech Prep program activities. We were one of three programs selected to present a brief success story. Copies of all success stories were made available. Various programs discussed their marketing campaigns. The state is presently working on a brochure for industry and another one for students/parents. They have just completed a pamphlet for educators. The state has also produced a 12-minute video that explains Tech Prep. Other marketing tools the state is looking into are mugs, lapel pins and paper sunglasses.

Objective 2. The refunding requirements for FY 92 were explained. The base grant amount will be $80,000 with a potential for $100,000. Jerry O'hare will share with me the specifics on how we might qualify for the extra $20,000. The down side is that the proposal must be filed with the state by April 15.

Information was also given on the availability of additional money for this year. At least $5,000 is being made available to each Tech Prep program to be used for a VIP type program for academic teachers. There has been a number of ideas generated already on how to best use the money so as many people as possible can benefit from this one-time opportunity.

DEVELOPMENT COMMITTEE NEWS

The Development Committee met, March 7, at Olney Central College. The meeting began with the following update from each high school:

Mt. Carmel is working toward a curriculum outline that will incorporate modified Applied English courses next year.

Oblong is developing their Tech Prep curriculum to include new science courses which will have applied components and the further development of their Applied English.

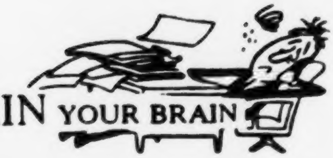
Cisne has made progress in redefining their math program to fit more closely with the proposed Tech Prep curriculum.

A conversation ensued on the modifications needed to enable the community college curriculums to meet Tech Prep goals. But, due to the lack of college faculty in attendance, little headway was made. Debra hopes to meet with college faculty members of the various Tech Prep programs to develop their curriculums.

The meeting continued with Debra's review of the March 5th state meeting. The highlights were: refunding requirements, A VIP type program for academic faculty this summer, and marketing developments.

The next Development Committee meetings were scheduled for April 19 and May 10. Debra needs to have each high school and campus curriculum outline by April 10, and implementation strategies by May 1.

Viewed during the meeting was the state's new Tech Prep promotion tape and the Amax Coal video.



DON'T DRAIN YOUR BRAIN

From Emotional Health.
Copyright 1965 by Rodale Press, Inc.

Although it's not visible like a bruise, and though, even those suffering from it sometimes have difficulty believing in it, brain fatigue does exist, doctors say. There's even a nickname for it--brain fag.

In fact, it's a common condition that most of us experience in a mild form daily. But when we change what we're doing--putting down a book to go for a walk or have dinner--the switch allows the mind to rest. In addition, if we get enough sleep, the next day we're ready to go to work again.

But for some people--most often workaholics who compulsively fill their time with labor--brain fatigue can be too serious to be cured simply with a change of pace and a good night's sleep. In fact, one of the symptoms may be difficulty in falling asleep and staying asleep.

You can suspect brain fatigue if you know you've been driving yourself hard, if you find it difficult to concentrate, and if you have trouble putting your thoughts together. Minor problems will irritate you out of proportion to their consequence. You will be jumpy and nervous. Your brain, which scientists say operates through a process of excitation and inhibition, has gotten these two functions confused, and your reactions will be unreliable.

The cure is simple--but not easy for the workaholics. It's this: good food, good sleep, and exercise. Plus, the gift to yourself of some truly free time, unconnected with any obligation. Loosen up and try to think of something to do that's not constructive, not structured, not purposeful. In other words, relax!

OBLONG HIGH SCHOOL PLANS TO USE APPLIED COMMUNICATIONS IN 1991-92 SOPHOMORE ENGLISH CLASSES

by Rebecca Darling

Oblong High School is planning to incorporate Applied Communications objectives and materials into its Sophomore English program in the 1991-92 school year. Applied Communications, written by the Agency for Industrial Technology in 1988, is a program designed to teach language arts, group work, and thinking skills employers want their employees to have. This curriculum was formulated by employers and educators working jointly.

The materials of Applied Communications are divided into fifteen modules. On each module, specific on-the-job skills are defined, analyzed, and taught. At the end of the module, students are given specific, "real life" work situations in which they are required to demonstrate the skills they have been learning in the module.

The practical work situations included in the Applied Communications modules are taken from a variety of industries. Some of which are health occupations, manufacturing, furniture retail sales, building maintenance, law, telemarketing, carpentry, automobile sales and printing.

The Language Arts Department and the Administration of Oblong High School are enthused about Applied Communications and are looking forward to incorporating its materials into the Sophomore English curriculum.

SUMMER MANUFACTURING EXPERIENCES

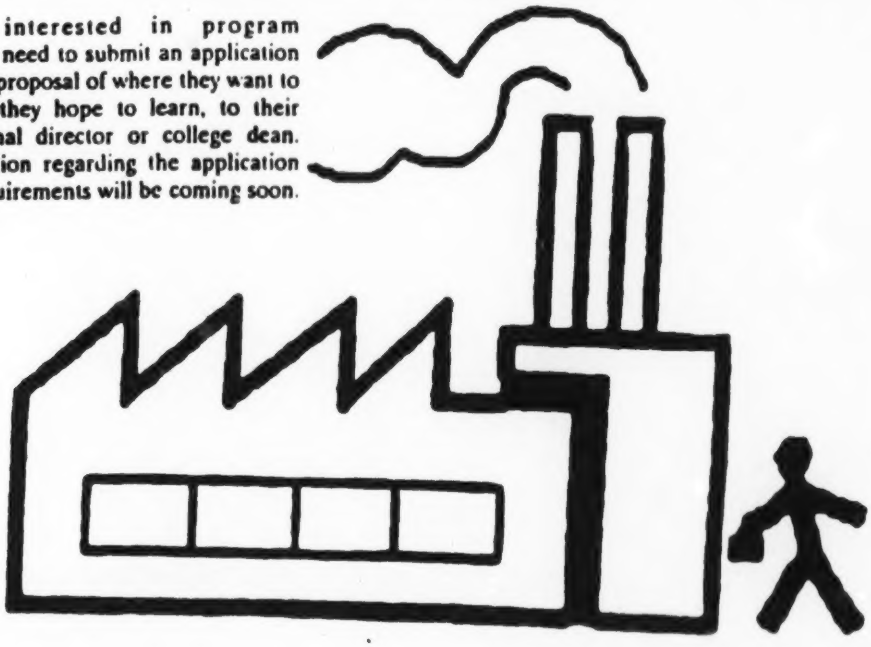
Tech Prep has just received word that additional state monies will be available to fund a summer, VIP style, program for academic faculty. This one-time plan, designed to provide educators with opportunities to expand their knowledge of business and industry, will be available to those that do not qualify for the traditional VIP program.

This summer, Tech Prep will offer two different methods of involvement. The first will be very similar to the vocational VIP program which allows instructors to work a week in the manufacturing plant of their choice. The program will pay participants $50 per day to shadow employees in their location. This lets the educator learn some of the "nuts and bolts" of the manufacturing plant. Observing a variety of job types enables the teacher to better understand the use of their discipline in industry and to explain student options in manufacturing.

Those interested in program participation will need to submit an application which includes a proposal of where they want to work and what they hope to learn, to their regional vocational director or college dean. Further information regarding the application deadline and requirements will be coming soon.

The second participation option will involve a number of summer bus trips to a wide variety of manufacturing plants throughout the Illinois Eastern Community College District and beyond. The goal is to provide opportunities to observe various manufacturing processes to as many people as possible so they are better able to integrate courses and applications. To meet this objective, participants will be required to submit a written synopsis of the tour with application possibilities, or develop a classroom application that they will be able to use in their fall and spring classes. Forms for this option will be distributed before school is out this spring. More detailed information on this program should be received shortly.

For additional particulars on the academic VIP program, please contact your regional vocational director, college dean or Debra Hunter.



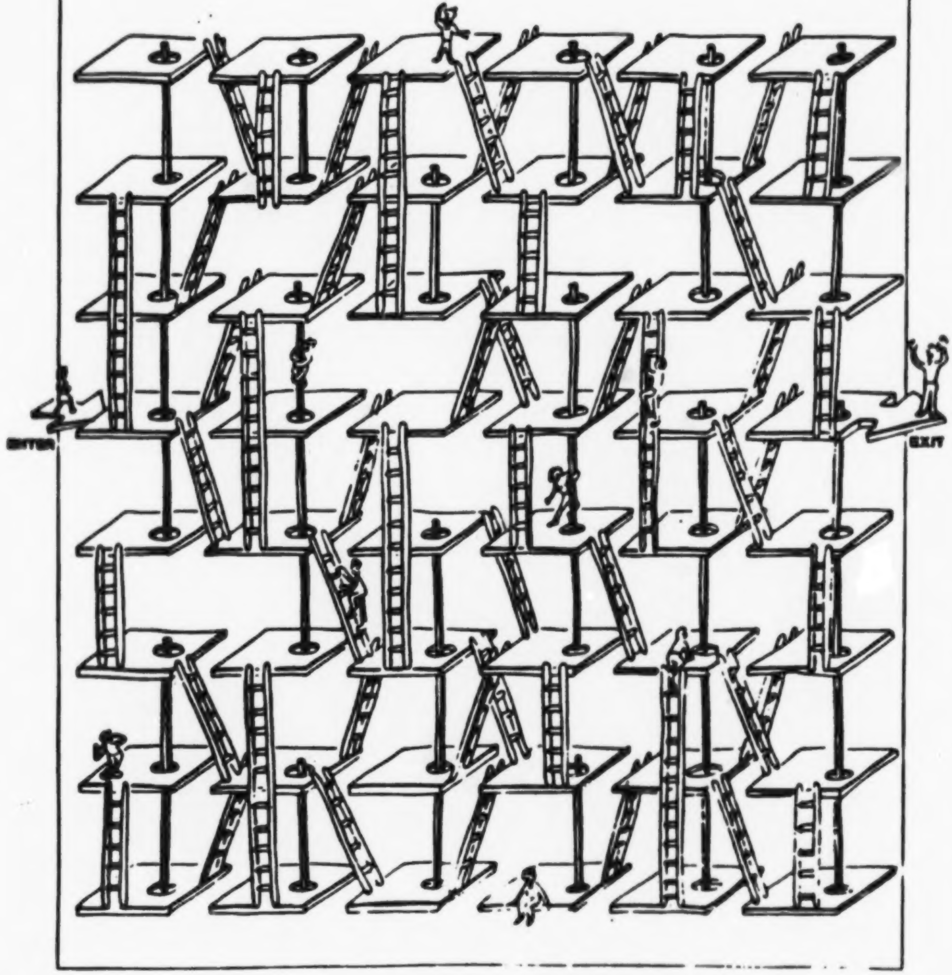
Chutes and Ladders ★★

by Peter May

An Eight-Story Maze

What goes up must come down, says the cliché. But not necessarily by the same route. In this maze, to get from the starting point at left center to the exit at right, you may go up only by using ladders, and down only by using chutes (or poles). However, it is not necessary to stay on a chute or ladder all the way to its end—you may get on or off at any platform it touches. Don't be discouraged if you don't solve the maze quickly—we all have our ups and downs.

Answer Drawer, page 62



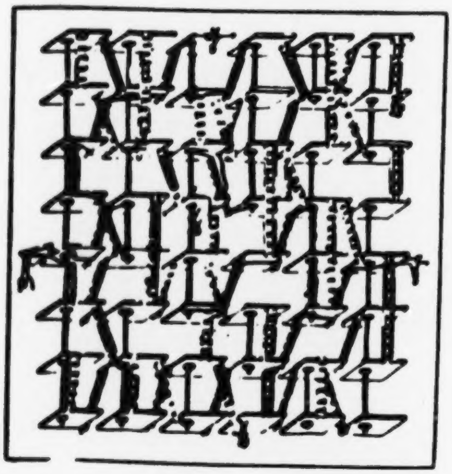
COMING IN APRIL:

3 - Board Meeting
5 - Tech Prep Cisne Faculty Meeting
8-9 - Special Needs Conference
- Tech Prep Presentation
10 - Curriculum Outline Due
15 - Refunding Proposal to State
19 - Development Committee Meeting

COMING IN MAY:

1 - Implementation Plan Due
6-7 - NIU Symposium
8 - German Apprenticeship Expert in Area
10 - Development Committee's Final FY 91 Meeting

GOOD IDEAS ARE COMMON~
WHAT'S UNCOMMON ARE PEOPLE WHO'LL WORK HARD ENOUGH TO BRING THEM ABOUT.



Chutes and Ladders

TECH PREP COMMUNIQUE

DEVELOPMENT COMMITTEE NEWS

The Development Committee met April 19 at Olney Central College to review the curriculum sequences drawn up by each high school. To help answer questions regarding articulation potentials with four-year institutions, Larry Helsel, Assistant Dean/Chair, Eastern Illinois University's School of Technology, and Linda Grace from the College of Technical Careers at Southern Illinois University at Carbondale were in attendance. Both presented information concerning their schools' technology programs and then fielded questions from the committee.

Though neither representative was from the admissions office, it was generally felt that the sequences developed should meet the schools' entrance requirements. It was also felt that Bachelor of Science candidates will be more successful if challenged at high school and community college levels.

Also discussed were objectives of the FY 92 grant, the requirements for the implementation plan and proposed resource materials. The Development Committee will meet again May 10 at OCC.

SAFETY ARTICLE - PERSONAL PROTECTIVE EQUIPMENT, by John Collier

Do you think that wearing protective gear on the job is unnecessary? Then think again. Thousands of accidents happen every day to people who thought "it couldn't happen to them."

According to the National Safety Council, the total "work" accident costs in 1989 were estimated at a staggering $48.5 billion. The cost per disability injury in 1989 was $18,000 per case. These figures include estimates of wage losses, medical expenses, insurance administration costs, and uninsured costs. Obviously, many of these injuries could have been prevented if proper personal protective equipment had been worn.

Always protect yourself from possible hazards. Be sure to match the equipment to the hazard. A partial listing of equipment that can be used follows:

goggles/ safety glasses
safety hat
earplugs
respirator
apron
gloves
special shoes

If you're not sure about what kind of protective equipment to wear, ask your supervisor.

Remember, "play it safe" and wear personal protective equipment.

* * *

BOARD OF GOVERNANCE MINUTES - April 3, 1991

The meeting was called to order by Scott Hamilton at 1:45 p.m. Board members present were Bob Boyles, Jim Taylor, Eula Adams, Gene Sams, Bill Steichman, Kenton Peak, Angelo Abbott, Scott Hamilton, Debra Hunter, and Dwight Mobley.

Bob Boyles moved, seconded by Eula Adams, to accept the minutes of the previous meeting. The motion carried.

The refunding proposal was presented by Debra. The proposal allows for the addition of six new high schools -- three as pilot centers for a new business program and three high schools that may choose either business or manufacturing technology. These will be divided equally among the three regions.

There was some discussion of the activity flow chart that is to be followed in implementation of the proposal. Scott reminded the group that task lists have already been developed for business and should be used by the Advisory Council.

The proposed budget for FY 92 was presented for discussion. A motion was made by Jim Taylor, seconded by Eula Adams, that the coordinator's contract be increased to a 12-month contract and the title be changed to Program Director. The motion carried. The budget was further edited to eliminate the line items for full time secretary/benefits, and teacher's stipends; and to add line items for marketing and substitute teacher's salary. A motion was was by Eula Adams, seconded by Jim Taylor, that final adjustments be made to the FY 92 budget by Debra with submission to Kenton Peak and Scott Hamilton for final approval.

BOARD OF GOVERNANCE MINUTES CONT.

The forms for the Tech Prep VIP were distributed and discussed. Participants will be selected from faculty and administrators of the pilot center high schools and colleges of the district. April 26 has been set as the deadline for returning the applications to the proper office. The Governance Board will evaluate the applications and approvals will be made to use the available funds. This selection will be made at a meeting on May 2, 1991, at 12:00 noon, in the Bunquet Room at OCC.

A motion was made by Jim Taylor and seconded by Eula Adams instructing Debra to add to the grant proposal a stipulation that an advisory committee representing all five vocational areas be formed as an overall Tech Prep advisory committee. Motion carried.

A motion was made by Kent and seconded by Eula instructing Debra to proceed to submit the grant proposal for FY 92 as edited. Motion carried.

A motion was made by Bob Boyles and seconded by Jim Taylor to adjourn the meeting. Motion carried.

Submitted by:
Dwight Mobley, Secretary

FY 92 REFUNDING PROPOSAL

The Tech Prep grant writing for this year is drawing to a close. The next step will be to seek approval from the State Board of Education. We should receive final approval and funding by July 1.

The objectives, as submitted to the state, for Tech Prep's second year are:

1. Begin the implementation process of the Tech Prep manufacturing technology curriculum at the three original pilot high schools.

2. Develop a 4 + 2 Tech Prep curriculum in business in at least three pilot high schools that articulate with Illinois Eastern Community Colleges programs. The emphasis of this curriculum will be on improving math, communication and science skills through the use of concept integration and application.

3. Target three additional high schools as pilot sites for either the development of the manufacturing technology or business curriculum.

4. Broaden the scope of the current Tech Prep Advisory Council to include local representatives from industry, business, home economics, agriculture and health.

5. Develop a three-year implementation plan for the business curriculum.

6. Review and modify the manufacturing technology three-year implementation plan developed in FY 91.

7. Provide staff development for teachers and counselors.

FY 92 REFUNDING PROPOSAL CONT.

8. Develop an inventory of resource needs, both human and equipment, and an allocation plan.

9. Develop a marketing campaign which explains the Tech Prep program benefits to students, parents and the community.

10. Develop articulation agreements with Illinois state universities and Illinois Eastern Community Colleges for Tech Prep curriculums.

11. Develop a work-based component for each Tech Prep program.

12. Evaluate Tech Prep activities.

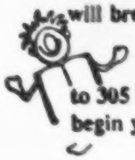
13. Disseminate information on Tech Prep activities to other Tech Prep programs, local schools and businesses.

As you can see, we have a challenging and interesting year ahead. But, I am sure that our continued enthusiasm, interest and dedication will enable us to meet these objectives and create a Tech Prep program that increases students' employability.

* * *

CALL FOR TRADE MAGAZINES

Calling all old, neglected or unwanted industrial trade magazines and journals. Please make yourself known to the Tech Prep director. She has connections for quick adoptions that will breathe new life into your glossy fibers.



Ask your industrial owner to deliver you to 305 North West Street, Olney, IL 62450, and begin your new future today!!

INDUSTRY SKILL SURVEY RESULTS

In early February, Tech Prep distributed a survey to 134 manufacturers in the IECC District. The survey was designed to gather information on current employee and projected future employee skill levels. Information was also revealed on company size, use of current automation processes, and their manufactured product.

Eighteen surveys were returned, the majority being from larger industries. The respondents were managers with generally less than three years or more than ten years employment with the company. The majority either did or did not have children enrolled in the local schools. The respondents represented companies ranging from under 100 to over 1,000 employees with more than fifty percent employing in excess of 500. These manufacturers were predominantly in the automotive industry utilizing metals and plastics.

The survey found that twelve percent of those replying have implemented the Manufacturing Resource Planning Program (MRP II), Automated Data Collection, Total Quality Control and programmable and logic controllers, ten percent utilize computer integrated manufacturing concepts and quality circles, only nine percent currently use CAD or Material Routing Programs (MRP). When asked how many of their employees are skilled in specific technology areas, the indication was 16 welders, 15 in machine maintenance, 11 each in electrical maintenance and tool and die fabrication. There were an equal number of CAD and board drafters (6), and only 3 CNC programmers. Interestingly, areas that respondents felt would show the largest increase in employees in the next five to ten years are those that currently have a large number of workers. The highest vote getter was machine maintenance (24) followed by industrial electronics (15), welding (11), CNC programming (9), electrical maintenance (9), general electronics (9), tool and die designers (9), tool and die fabricators (9). CAD drafting received a meager 5 responses.

The top ten skills, based on percentages, the survey identified are as follows. For each labor division, the respondent was asked to indicate current and future skills; "C" is for current, "F" for future.

GENERAL LABOR

Basic adding and subtracting (CF)
Appropriate work behavior (CF)
Team work (CF)
Multiplication, division and fractions (CF)
Communicate in English (CF)
Read simple instructions (CF)
Understanding of management functions (CF)
Write simple sentences (CF)
Reading instruction manuals (CF)
Analyze problems (CF)
Goal setting (C)
Understand their place in the manufacturing process (F)

SKILLED TRADES

Appropriate work behavior (CF)
Team work (CF)
Communicate in English (CF)
Understand their place in the manufacturing process (CF)
Read simple instructions (CF)
Reading instruction manuals (CF)
Multiplication, division and fractions (CF)
Basic adding and subtracting (CF)
Understanding of management functions (CF)
Reading technical journals (CF)
Goal setting (F)
Write simple sentences (C)
Creative thinking (C)
Analyze problems (C)

OFFICE TECHNICAL

Appropriate work behavior (CF)
Communicate in English (CF)
Team work (CF)
Reading instruction manuals (CF)
Multiplication, division and fractions (CF)
Basic adding and subtracting (CF)
Write simple sentences (CF)
Critical thinking (CF)
Reading simple instructions (C)
Write paragraphs, memos (C)
Understanding of management functions (C)
Understanding of management theory and concepts (F
Knowledge of the history of manufacturing (F)
Analyze problems (F)
Goal setting (F)
Computer knowledge (F)

1ST LEVEL MANAGEMENT

Creative thinking (CF)
Analyze problems (CF)
Comprehend the entire manufacturing process (CF)
Goal setting (CF)
Team work (CF)
Appropriate work behavior (CF)
Understanding of management functions (CF)
Communicate in English (C)
Understanding of management theory and concepts (C)
Orally present material to a group (C)
Understand their places in the management process (F)
Critical thinking (F)
Computer knowledge (F)

2ND LEVEL MANAGEMENT

Team work (CF)
Creative thinking (CF)
Analyze problems (CF)
Critical thinking (CF)
Goal setting (CF)
Orally present material to a group (CF)
Comprehend the entire manufacturing process (CF)
Understanding of management theory and concepts (CF)
Appropriate work behavior (CF)
Reading simple instructions (CF)
Multiplication, division and fractions (CF)
Write paragraphs, memos (CF)
Communication in English (CF)
Write departmental reports (C)
Goal setting (C)
Basic adding and subtracting (C)
Understand their place in the manufacturing process (F)
Computer knowledge (F)
Understanding of management functions (F)
Reading instruction manurals (F)

If you would like more information on the survey or results, please contact Debra Hunter.

TECH PREP INSTRUCTOR PRACTICUM

Additional money has been received from the state to conduct a VIP style program this summer. The Tech Prep Instructor Practicum (TPIP) will be different from the VIP program in that it is designed primarily for academic teachers and will offer applicants two options for participation. Like the VIP program, faculty members will be able to shadow employees in manufacturing firms for up to a week, or they could select to attend a number of tours of local and area manufacturing firms.

The goal of the practicum is to familiarize members of the education community with current manufacturing processes and management philosophies. It is hoped that through this exposure, teachers and administrators will better understand the employment needs of manufacturers and be able to translate that into classroom activities. To help foster the translation of the TPIP experience to curriculum, each participate will be required to write an educational application for use in their classroom.

The Board of Governance will review applications May 2; those selected will be notified. Likewise, companies assisting in this program will be supplied with names of the participants. Those selecting the tour option will receive the data in May.

CORPORATE CHANGES ARE MAKING COMPANIES GREAT PLACES TO WORK

Synopsis of "When Companies are Great Places to Work"
Reader's Digest, January, 1987

The change in industry from a product orientation to a service orientation has caused major alterations to the corporate structure and business philosophies of many companies. During the industrial age, companies relied on their money and machines. Today, as the information era takes hold, information, knowledge and creativity are the strategic resources. In other words, in today's work environment, people are the most important asset and provide the corporations with their competitive edge.

People, however, are in increasingly short supply. "The number of teenagers in the work force declined nineteen percent from 1979 to 1985. With labor shortages for the rest of this century, corporations will aggressively compete for first-rate employees. And the most talented will be attracted to companies that are great places to work."

What makes these companies great places to work? They are not traditional companies. They have restructured to accommodate the fierce demands for employees. The management hierarchical pyramids have flattened to eliminate middle management. Corporations are relying on self-management and small-team models to motivate employees and fight their own bureaucractic tendencies.

The characteristics of these new style companies are:

1. An environment for personal growth --
   contributing factors to personal growth include "job sharing, flextime, permanent part-time, work sponsored lecture series, travel, sabbaticals and lateral move opportunties."

BEST COPY AVAILABLE

CORPORATE CHANGES ARE MAKING COMPANIES GREAT PLACES TO WORK CONT.

2. Managers as facilitators -- The manager must be one who is "skilled in eliciting the right answers from others." Dorothy Largay, Acting Director of Apple University, Apple Computer's in-house employee development group, says, "Apple is looking for people who can foster creativity within the context of accountability -- people who are coaches and team builders rather than controllers of others."

3. Compensation systems based on performance -- "Re-invented companies operate on the theory that the most productive employees are ones who share ownership." New financial arrangements are being explored including "stock-purchase plans, profit sharing, even outright employee ownership."

4. Greater reliance on networking- "In a networking environment, people learn from peers; everyone is a resource for everyone else and there is a continuous interaction among employees. One New York advertising agency, J. Water Thompson, has even opened an after-hours club to help foster networking."

5. Opportunities for "intrapreneurs" -- "Intrapreneurs are people with entrepreneurial skills employed in corporations. Intrapreneurial relationships are win/win arrangements. The company retains a talented person and gets a profitable new line of business, the employee gets the satisfaction of developing his or her idea with less risk."

6. An emphasis on quality of life -- "When locating a plant during the industrial period, companies studied transportation, natural resources, energy and proximity to market. In the information service economy, when businesses can locate almost anywhere, re-invented companies are looking for good climate, schools and health care; reasonable housing costs; a low crime rate; and cultural and recreational opportunities - the things that attract highly qualified people."

The changes in industry are fostering new approaches to traditional business philosophies. These changes are being driven by a need for a more competitive and productive workforce and are fueling corporate expressions in the humanistic values of trust, freedom and respect forcing corporations to become great places to work.

TECH PREP
Debra Moll Hunter, Director
305 N. West Street
Olney, IL 62450

COMING IN MAY - - -

2	**Board meeting, 12:00, OCC**
10	**Development Committee Meeting**
12	**Mother's Day**
17	**IECC Graduation**
27	**Memorial Day - IECC Holiday**

APPENDIX I

High School Vocational Classes Survey Results

Tech Prep

"Preparing the Future Work Force through Integration
of Education, Business and the Community"

Debra Moll Hunter, Director

305 N. West Street
Olney, IL 62450
(618) 395-4351, ext. 2285

Board of Governance

Eula Adams, Director
Clay/Jasper/Richland/N. Wayne
(618) 723-2335

Scott Hamilton, Director
Twin Rivers
(618) 544-8664

James Taylor, Director
Edwards/Wabash/Wayne/White
(618) 382-2830

Angelo Abbott, Dean
Olney Central College
(618) 395-4351

John Arabatgis, Dean
Lincoln Trail College
(618) 544-8657

Bob Boyles, Dean
Frontier Community College
(618) 842-3711

Dwight Mobley, Dean
Wabash Valley College
(618) 262-8641

Kenton Peak
Director of Educational Services
Illinois Eastern Community College
(618) 393-2982

Gene Sams, Principal
Mt. Carmel High School
(618) 262-5104

Bill Steichman, Superintendent
(618) 673-2154

Sandra Ward, Principal
Oblong High School
(618) 592-4235

HIGH SCHOOL VOCATIONAL SURVEY SUMMARY

We had a good return on the high school vocational surveys. As you may recall, the surveys were sent to Mt. Carmel, Oblong and Cisne high schools for distribution to all vocational classes. Because they were distributed by class and not by student, there is probably some duplication in the 534 returned responses.

There were many questions that required multiple answers; therefore, the percentages were calculated based on total number of responses per question.

The survey results cannot be used for specific statistics because of the lack of experimental control throughout the survey process. However, I feel the findings are valid representations of trends and can be used for the purpose of creating a bench mark to judge the success of the Tech Prep initiative.

Debra Hunter

INDUSTRIAL CLASSES

Vocational Metals I and II
Woods I and II
Transportation Technology (Auto Tech)
Energy Technology
Drafting I and II
Technical Manufacturing (Production Tech)

ALL CLASSES (includes the above industrial classes)

Accounting I and II
Information Processing
Typing I
Computer Concepts
Business Technology and Concepts
Introduction to Business
Business
Business Education
Orientation to Home Economics
Adult Living
Child Development
Clothing and Textiles
Foods and Nutrition
Communication Tech
Graphic Communication
Diesel Mechanics
Small Engines
Ag 4
Ag Science
Hero

SUMMARY LISTING OF OCCUPATIONAL CATEGORIES, DIVISIONS, AND GROUPS

OCCUPATIONAL CATEGORIES

0/1	Professional, technical, and managerial occupations
2	Clerical and sales occupations
3	Service occupations
4	Agricultural, fishery, forestry, and related occupations
5	Processing occupations
6	Machine trades occupations
7	Benchwork occupations
8	Structural work occupations
9	Miscellaneous occupations

TWO-DIGIT OCCUPATIONAL DIVISIONS

PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

00/01	Occupations in architecture, engineering, and surveying
02	Occupations in mathematics and physical sciences
04	Occupations in life sciences
05	Occupations in social sciences
07	Occupations in medicine and health
09	Occupations in education
10	Occupations in museum, library, and archival sciences
11	Occupations in law and jurisprudence
12	Occupations in religion and theology
13	Occupations in writing
14	Occupations in art
15	Occupations in entertainment and recreation
16	Occupations in administrative specializations
18	Managers and officials, n.e.c.
19	Miscellaneous professional, technical, and managerial occupations

CLERICAL AND SALES OCCUPATIONS

20	Stenography, typing, filing, and related occupations
21	Computing and account-recording occupations
22	Production and stock clerks and related occupations
23	Information and message distribution occupations
24	Miscellaneous clerical occupations
25	Sales occupations, services
26	Sales occupations, consumable commodities
27	Sales occupations, commodities, n.e.c.
29	Miscellaneous sales occupations

SERVICE OCCUPATIONS

30	Domestic service occupations
31	Food and beverage preparation and service occupations
32	Lodging and related service occupations
33	Barbering, cosmetology, and related service occupations
34	Amusement and recreation service occupations
35	Miscellaneous personal service occupations
36	Apparel and furnishings service occupations
37	Protective service occupations
38	Building and related service occupations

AGRICULTURAL, FISHERY, FORESTRY, AND RELATED OCCUPATIONS

40	Plant farming occupations
41	Animal farming occupations
42	Miscellaneous agricultural and related occupations
44	Fishery and related occupations
45	Forestry occupations
46	Hunting, trapping, and related occupations

PROCESSING OCCUPATIONS

50	Occupations in processing of metal
51	Ore refining and foundry occupations
52	Occupations in processing of food, tobacco, and related products
53	Occupations in processing of paper and related materials
54	Occupations in processing of petroleum, coal, natural and manufactured gas, and related products
55	Occupations in processing of chemicals, plastics, synthetics, rubber, paint, and related products
56	Occupations in processing of wood and wood products
57	Occupations in processing of stone, clay, glass, and related products
58	Occupations in processing of leather, textiles, and related products
59	Processing occupations, n.e.c.

MACHINE TRADES OCCUPATIONS

60	Metal machining occupations
61	Metalworking occupations, n.e.c.
62/63	Mechanics and machinery repairers
64	Paperworking occupations
65	Printing occupations
66	Wood machining occupations
67	Occupations in machining stone, clay, glass, and related materials
68	Textile occupations
69	Machine trades occupations, n.e.c.

BENCHWORK OCCUPATIONS

70	Occupations in fabrication, assembly, and repair of metal products, n.e.c.
71	Occupations in fabrication and repair of scientific, medical, photographic, optical, horological, and related products
72	Occupations in assembly and repair of electrical equipment
73	Occupations in fabrication and repair of products made from assorted materials
74	Painting, decorating, and related occupations
75	Occupations in fabrication and repair of plastics, synthetics, rubber, and related products
76	Occupations in fabrication and repair of wood products
77	Occupations in fabrication and repair of sand, stone, clay, and glass products
78	Occupations in fabrication and repair of textile, leather, and related products
79	Bench work occupations, n.e.c.

STRUCTURAL WORK OCCUPATIONS

80	Occupations in metal fabricating, n.e.c.
81	Welders, cutters, and related occupations
82	Electrical assembling, installing, and repairing occupations
84	Painting, plastering, waterproofing, cementing, and related occupations
85	Excavating, grading, paving, and related occupations
86	Construction occupations, n.e.c.
89	Structural work occupations, n.e.c.

MISCELLANEOUS OCCUPATIONS

90	Motor freight occupations
91	Transportation occupations, n.e.c.
92	Packaging and materials handling occupations
93	Occupations in extraction of minerals
95	Occupations in production and distribution of utilities
96	Amusement, recreation, motion picture, radio and television occupations, n.e.c.
97	Occupations in graphic art work

HIGH SCHOOL VOCATIONAL SURVEY

Q. 1 Why are you taking this class?

%	Industrial classes	%	All Vocational Classes
62.7	I wanted to learn more about this subject	54.0	I wanted . . . .
12.3	The job I want requires it	20.2	The job I want requires it
10.5	My friends were taking it	10.5	My counselor suggested it
8.8	My counselor suggested it	9.4	My friends were taking it
5.3	Other	3.4	Other
.4	My parents told me I had to	2.4	My parents told me I had to

The difference between the placement of "My counselor suggested it" is probably due to the inclusion of typing and computer courses in the "All" category. These classes are both frequently recommended by counselors.

Q. 2 What new skill do you hope to have when this course is completed?

45.7	Know how to build things	36.3	Know how to run equipment
33.7	Know how to run equipment	20.4	Know how to build things
14.0	Team work skills	18.8	Team work skills
4.1	Learn math applications	12.3	No answer
2.5	No answer	8.7	Learn math applications
0.0	Learn English applications	3.9	Learn English applications

There is nothing surprising in the responses to this question. Quite a few respondents selected more than one answer.

Q. 3 What other classes have helped you do things in this class? (Pick as many as you think appropriate.)

58.8	Math	42.1	Math
14.2	Other	22.7	English
12.8	English	17.3	Other
4.5	Chemistry	5.8	Home Ec.
3.5	History	4.2	History
1.7	Physics	3.5	Chemistry
.7	Psychology	1.6	Physics
.2	Home Ec.	1.6	No answer
0.0	No answer	1.2	Psychology

I think it is interesting to note how low physics is. Especially when physics principles are used throughout the semester in the industrial courses.

Q. 4 What job/career do you want when you get out of school?

35.7	Professional Technical and management	47.9	Professional . . .
27.9	Service	19.8	Service
14.9	No answer	12.8	No answer
6.5	Miscellaneous	5.3	Clerical and sales
5.2	Machine trades	4.5	Ag
5.2	Agricultural	4.0	Misc.
1.3	Clerical	2.8	Machine trades
1.3	Processing	1.0	Processing
1.3	Structural work	.6	Structural
.6	Benchwork	.6	Benchwork

See attached "Summary listing of Occupational ..." for more detail of the breakdown of these divisions.

Q. 5 Do you plan to further your education after high school?

88.2	Yes	92.2	Yes
9.8	No	5.5	No
1.9	Undecided	2.3	Undecided

Q. 6 If you are continuing your education, what level to you hope to attain?

31.0	Master's Degree	29.8	Bachelor's Degree
22.3	Bachelor's Degree	27.8	Master's Degree
13.6	Associate Degree	12.7	Associate Degree
10.7	Certificate	8.5	Certificate
7.8	No answer	7.1	No answer
6.8	Master	6.5	Doctorate
2.9	Journeyman	4.9	Master
2.4	Doctorate	2.0	Undecided
2.4	Undecided	.7	Journeyman

The high response to "Master's Degree" could be due to a confusion between the tradesman master and the college graduate program.

Q. 7 At your ten-year high school reunion, what do you hope to tell your friends that you have accomplished in your family?

49.0	Married with kids	60.0	Married with kids
27.0	No answer	19.5	No answer
13.8	Single	10.7	Married
10.1	Married	9.7	Single

The question also included responses to: Your Education; Your Career; and was designed to indicate students' fantasies and dreams.

For the most part, they answered consistently with their responses to Question 8. For that reason, I have recorded only the section that was not answered elsewhere.

Q. 8 Realistically, what are your plans for the next ten years?

18.9	Good job/high pay	22.6	Go to college
18.2	Go to college	15.7	Marry
14.9	Marry	15.4	Good job/high pay
12.4	No answer	12.9	Have children
8.0	Have children	8.2	Finish education/pass
7.6	Other	7.5	Other
5.8	Finish education/ pass current class	5.6	No answer
4.0	Military	4.3	Successful
3.2	Successful	2.4	Own a business
2.9	Be rich	2.0	Military
1.5	Undecided	1.3	Undecided
1.1	Own a business	1.2	Be rich
.7	Go to war/Middle East	.6	Farm
.7	Farm	.2	Go to war/Middle East

These are the most frequent phrases that were used. Typically, the respondents used two or more of them to answer the question. If there was little information given in Question 8, and Question 7 was answered realistically, responses to Question 7 were listed here.

Sample responses to Questions 7 and 8:
(They are recorded as they were written.)

Your education: I went to all 4 years to colledge
Your career: I'm being the best artist I can be
Your family: I have a wonderful family and a good look'n wife

* * * * * * *

Your education: A Master Degree
Your career: A $300,000 a yr. job
Your family: I have no family

No. 8 -- Get out of high school; go to colledge, get masters degree; get a job.

* * * * * * *

Your education: Bachelors' Degree
Your career: Hytech trans
Your family: 1 boy and wife

No. 8 -- not be dead

* * * * * * *

Your education: Graduated from University of Illinois, Champaign Urbana and from law school
Your career: Have my own successful practise in N. Carolina
Your family: I plan to still be single

No. 8 -- The same as above. My hopes and my realitys are the same.

* * * * * * *

Your education: ITT Tech graduate withe a Bachlars' Degree
Your career: Aeronautical Drafter for McDonald Douglas in St. Louis, MO.
Your family: Married 2 kids

No. 8 -- Go to ITT Tech. get bachars, go work for McDonald Douglas in St. Louis, MO as an aeronautical drafter.

* * * * * * *

Your education: Graduated at a 4 year college
Your career: work at a coal mine
Your family: two kids

No. 8 -- go to work, get married and have kids

* * * * * * *

Your education: to complet school
Your career: what kind a job I got
Your family: Have a good family

No. 8 -- to fine a job

* * * * * * *

Your education: went to EUI
Your career: I am head of the medical lab in a hospital and make a lot of $
Your family: I am married, I have a child and live in a huge house

No. 8 -- Continue my education, get a good job, get married & start a family

* * * * * * *

Your education: I went to college for 6 years
Your career: I'm an archetect
Your family: I have a wife and 2 children

No. 8 -- After I graduate from high school I plan to go to ITT Tech for 4 years and hopefully become a successful archetect.

* * * * * * *

No. 8 -- get a job get a house fix up some cars If I don't get killed in the middle east

* * * * * * *

Your education: got thru college
Your career: Ag mechanics and farming
Your family: married and have 2 kids

No. 8 -- Get out of high school go to college for 2 years and get married and have 2 kids and farm

* * * * * * *

Your education: I have learned a lot out of life so far
Your career: Im bringin in quiete a kit of money with my musical career
Your family: I have 2 boys, 1 girl and a wonderful wife

No. 8 -- What ever comes. But I really plan on going to Calif. Putting a group together & see just how we can do.

APPENDIX J

Development Committee Members' Tech Prep Ideas

TO: Mrs. Eula Adams
FROM: Charlie Lane
RE: Comments on Tech Prep
DATE: April 2, 1991

In reference to our conversation before Spring Break, I have these ideas on the Tech Prep program. I also will answer the questions you asked.

How to select a teacher to be on a Tech Prep committee

a. I think I would look for a staff member with the willingness to look at teaching from the perspective of the Tech Prep philosophy. A committee member who accepts the integration of academics and application to real world situations is essential. An English teacher interested in Shakespeare, a math teacher who stresses the inner logic of algebra, or a history teacher whose first love is the American Revolution will not consider changing the content of his course in ways that Tech Prep requires.

b. I would also look for a teacher that has the time to invest in serving on this committee. I had no idea how many meetings this program would have. By my count I have attended six and I did not attend all of them! That is many days for an instructor to be out of the classroom from November to April.

c. I would hope to find a person who has an understanding of the subject he/she teaches. A teacher will only a few years experience may not be able to see connections between theory and practice. While a teacher who is comfortable with the material in the text will seek out new examples of how this concept fits in world of ideas used by people in other fields. Let me use this example. The Pythagorean Theorem is a typical concept taught in my algebra class. I was struck by how carpenters, even students in production class, use this idea to obtain a 90° angle. They mark four units in one direction and three units in an approximate 90° direction. Then they measure five units from the endpoints of the two lines. Adjustments are made on the three lengths until they have a 3-4-5 triangle and the correct angle. It is such a beautiful answer to the student question an experienced teacher knows must be answered: "Why am I studying this?" People use math concepts to solve problems!

How to gain involvement in the Tech Prep program

a. My first suggestion is send teachers to tour local industries who use technology to produce goods and services. Few teachers have the opportunity to see what I have seen. I was impressed with the tours of Snap-on, E.H. Barre, etc. I could see types of machines my students could be using with the proper training. I also learned the types of concepts I should emphasize in my courses. (I understand there may be VIP funds for academic teachers to do these tours during the summer.)

b. Next I think people new to Tech Prep would benefit from talking with business people from these community plants. I enjoyed the exchange of ideas on what employers were seeking in employees.

c. Obviously gaining the involvement of teachers is not enough. School board members, administrators, guidance counselors, and other staff people must be willing to change the curriculum to Tech Prep. Most important of all is convincing parents to see the technical careers as an alternative to college for their child. Tech Prep is designed for the middle 50% of students who will compose a major part of the next generation's labor force. To sell the Tech Prep program is the task facing people currently involved. We have started by forming a Tech Prep committee at our school. The committee has students, parents, teachers, administrators, a school board member, and local businessmen.

How to start Tech Prep in other schools

a. Don't try to re-invent the wheel! Spend time talking with people in pilot schools (Cisne, Mt. Carmel, and Oblong). Find out their mistakes and successes. Read about Tech Prep programs outside our part of Illinois. Indiana has its program several years ahead of ours. Look for materials from any source that integrates academics and applications.

b. Use those ideas that can be adapted to your particular school and be willing to risk a few of your own.

c. Expect your plan to encounter obstacles. Education is a people enterprise and people tend to resist change.

d. Evaluate your plan over many years so a student has the time to pass through high school and/or junior college and begin work full-time. I think follow-up studies of Tech Prep students should be required!

Comments on Tech Prep program

a. This program makes sense. Among other goals like citizenship, an appreciation of culture, etc., the curriculum should prepare students for competition in the world market. People in education and in business should share ideas on what needs to be taught.

b. I see a trend in the academic areas to move toward practical problems. The National Council of Teachers of Mathematics has taken a position to include real-life problem solving as part of the math curriculum. The same is true in some of the articles I read in Social Education from the National Council for the Social Studies.

I hope these recommendations help answer your questions.